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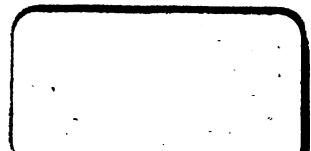
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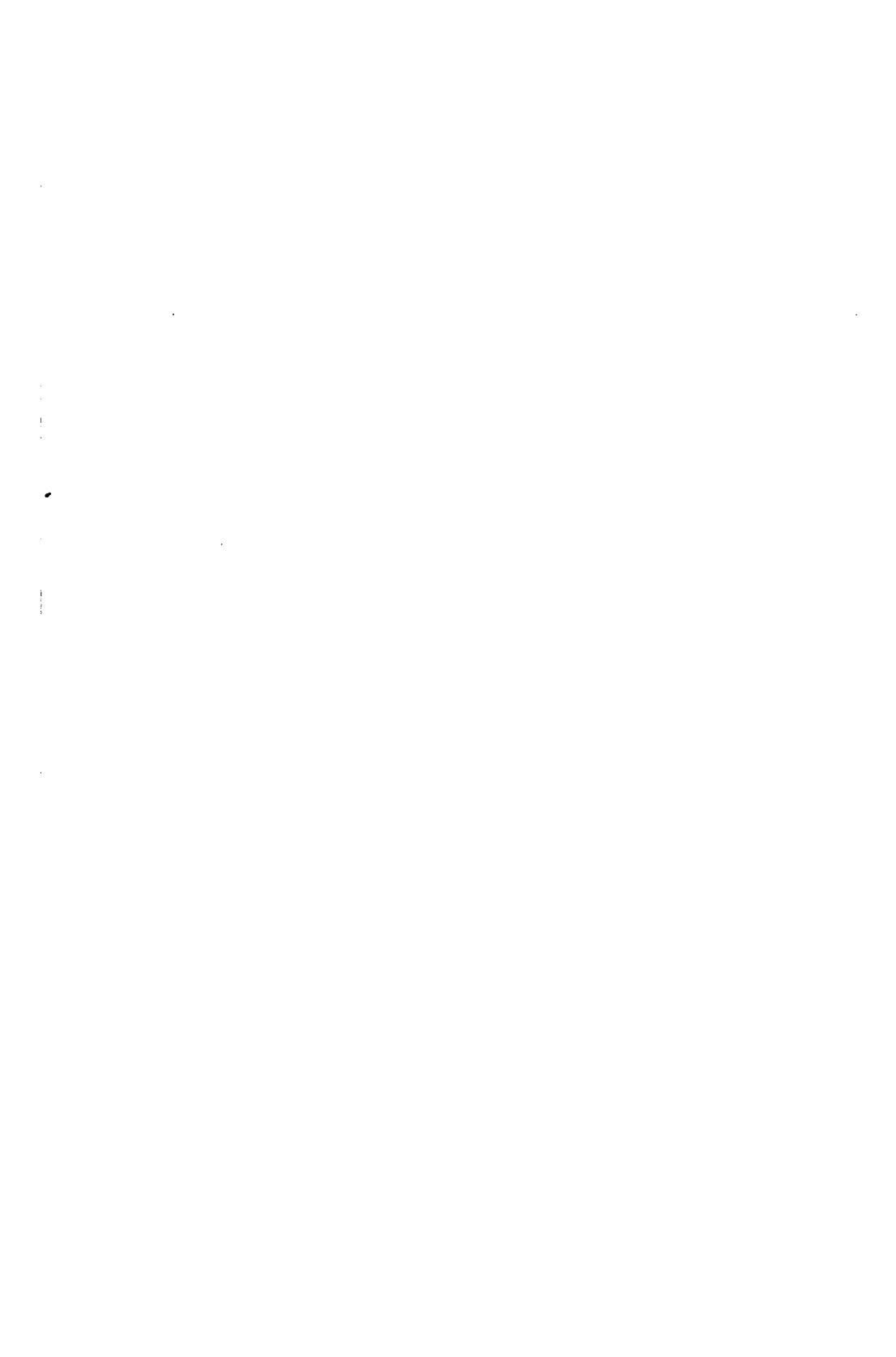
Library
Arnold Arboretum

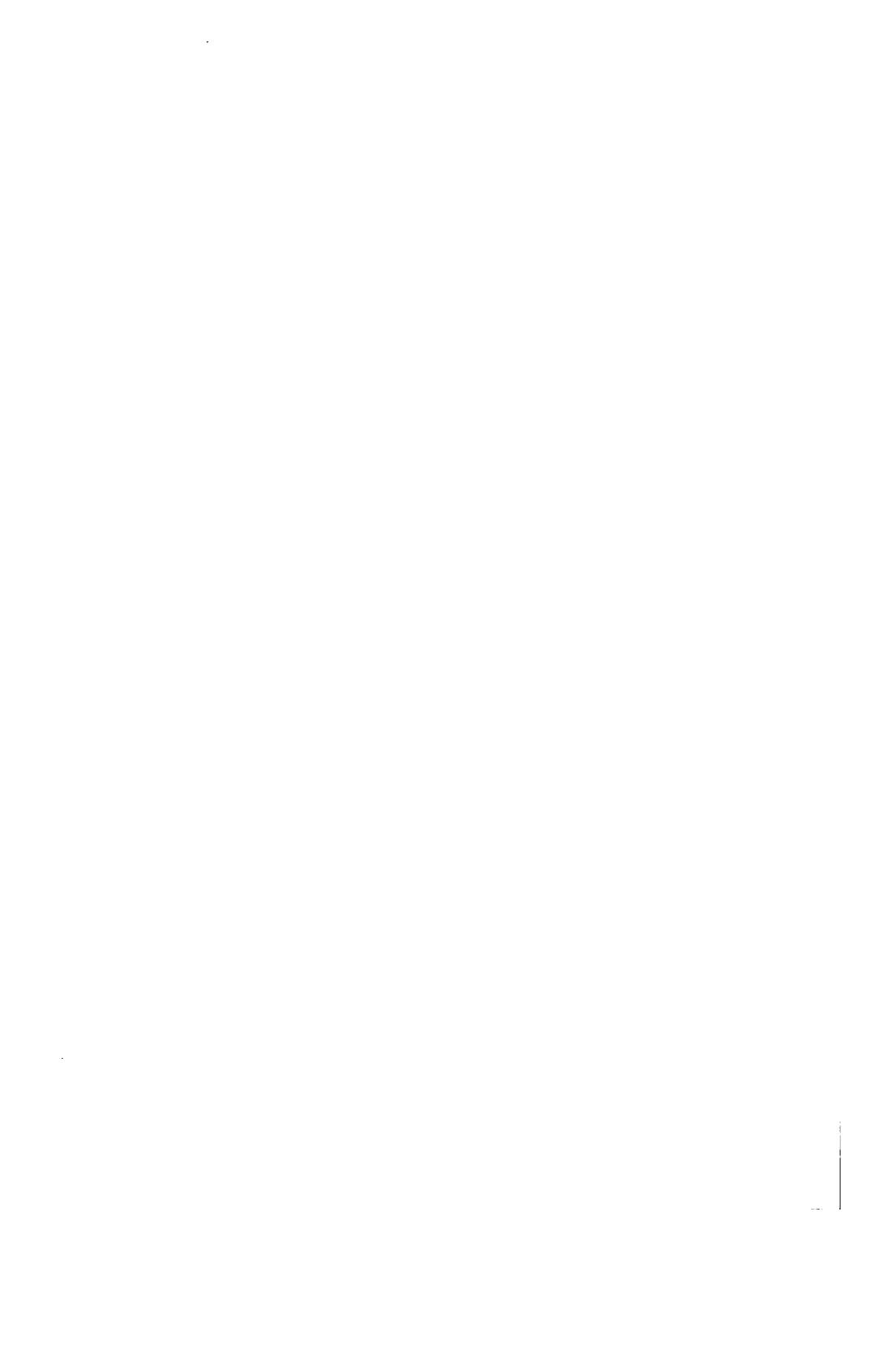


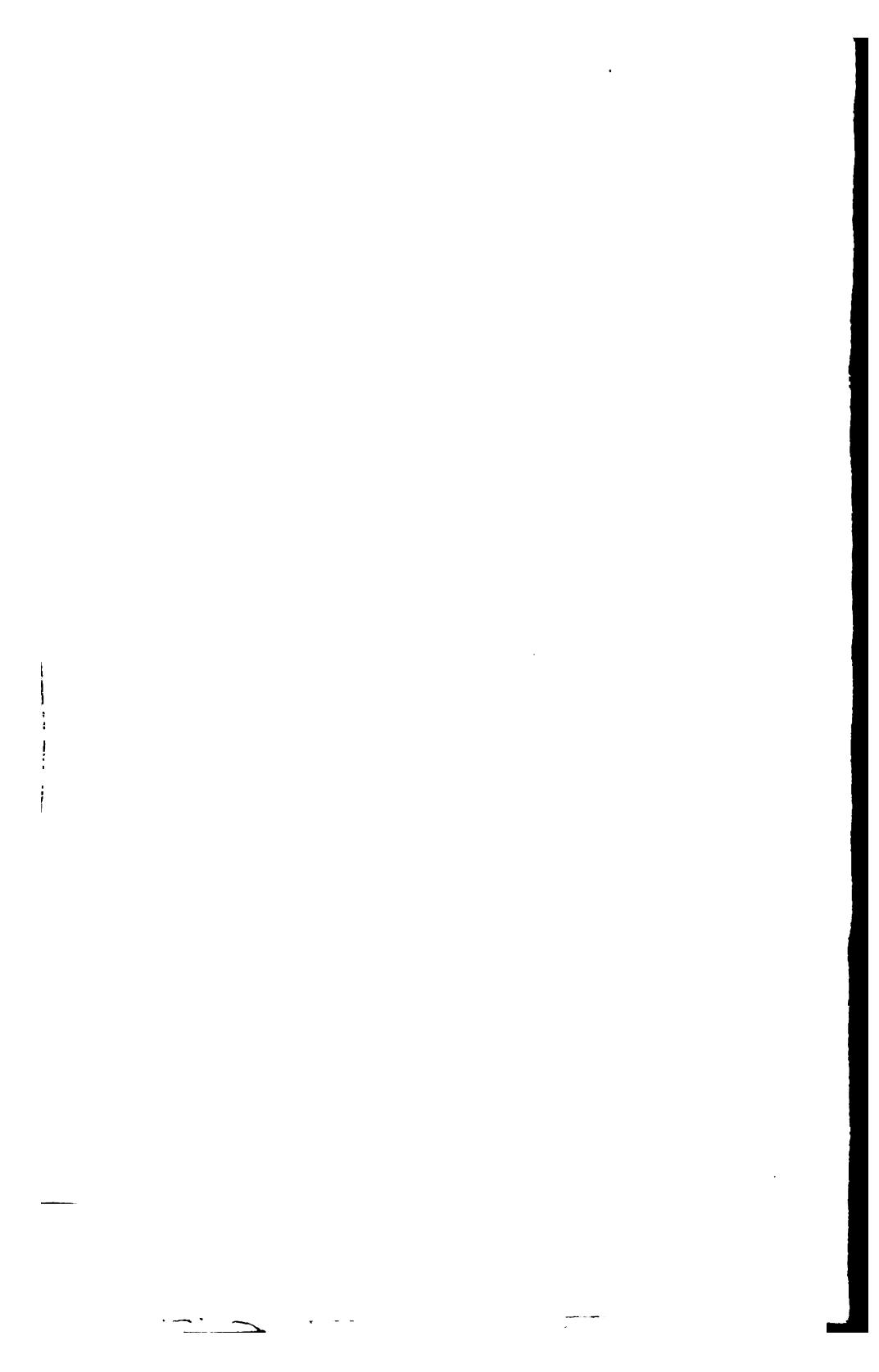
of
Harvard University

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REPORT

OF THE

Park Commissioners

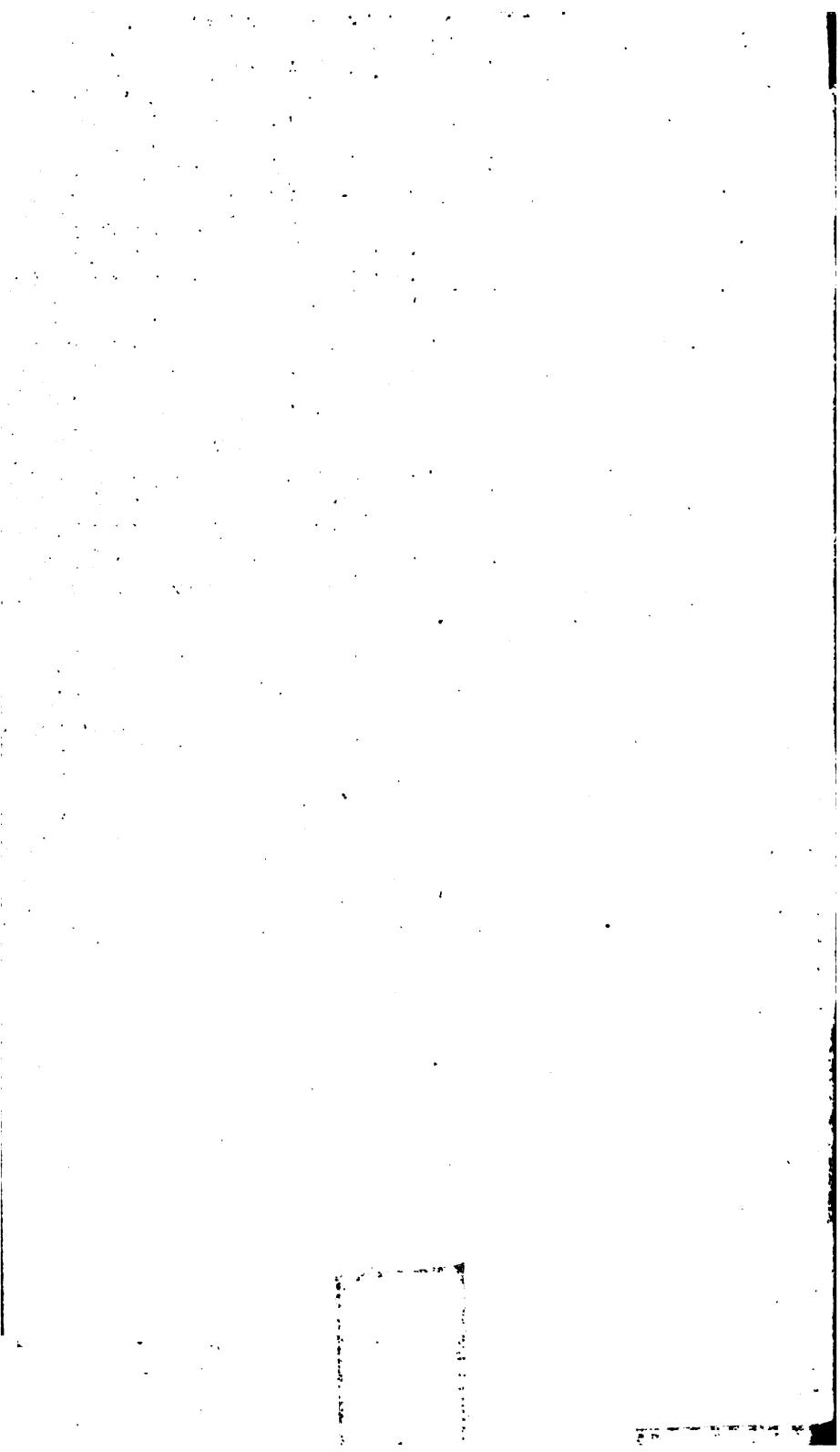
OF THE

Town of Plymouth, Mass.,

FOR

1895.

PLYMOUTH:
AVERY & DODD, PRINTERS.
1896.



REPORT

OF THE

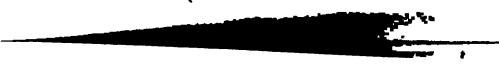
Park Commissioners

OF THE

Town of Plymouth, Mass.,

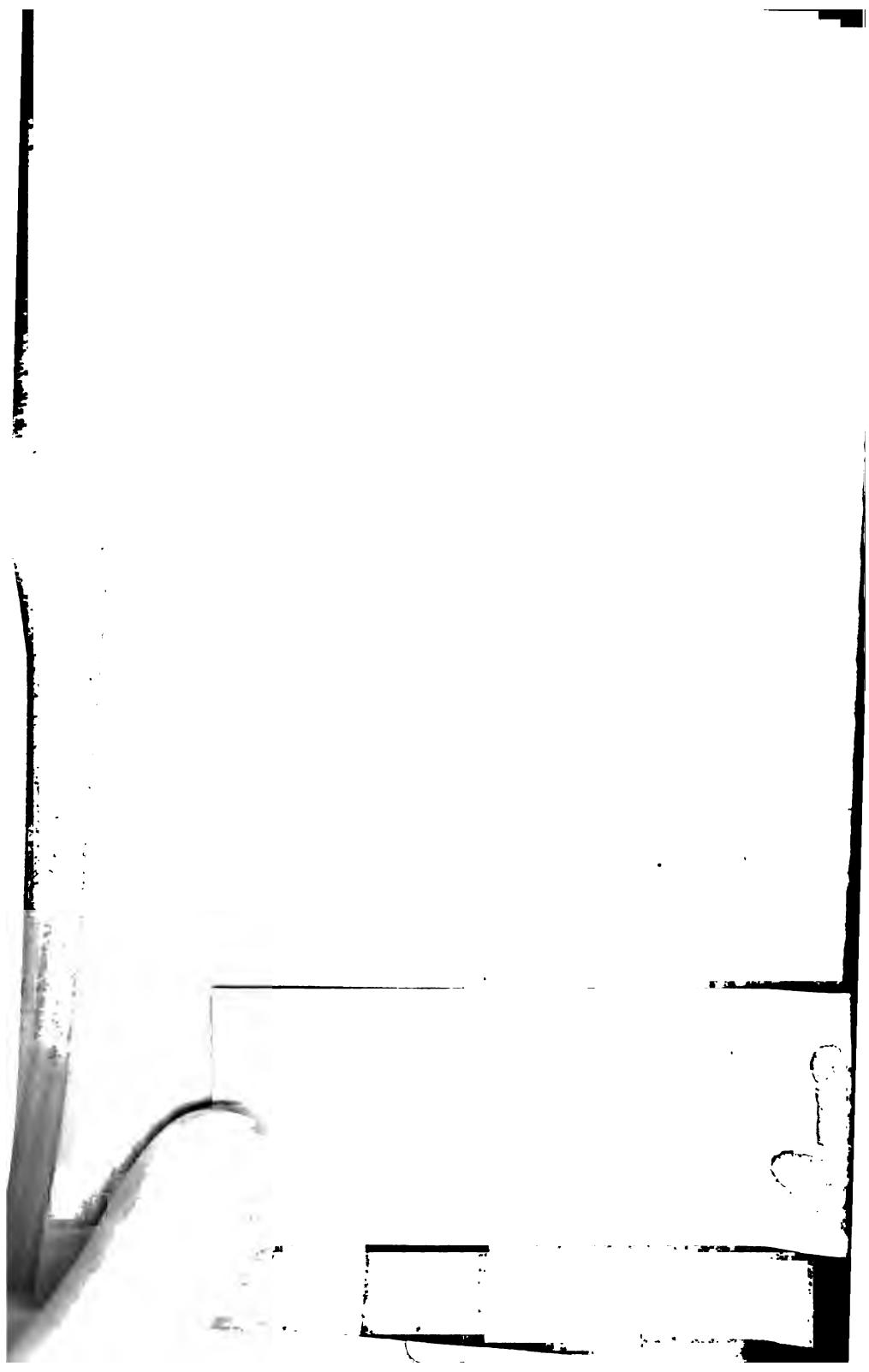
FOR

1895.



COMPLIMENTS OF

NATHANIEL MORTON



REPORT

OF THE

Park Commissioners

OF THE

Town of Plymouth, Mass.,—

FOR

1895.

**PLYMOUTH:
AVERY & DOTEN, PRINTERS.
1896.**

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SEVENTH ANNUAL REPORT OF THE PARK COMMISSIONERS

TO THE INHABITANTS OF THE TOWN OF PLYMOUTH.

MORTON PARK ACCOUNT.

Balance from 1894	\$9 33
Appropriation	350 00
Sale of $7\frac{3}{4}$ cords of wood	23 25
	<hr/>
	\$382 58

Expended for —

Labor	\$362 74
Printing	7 00
Tools and seeds	5 27
	<hr/>
	375 01
Undrawn	<hr/> \$7 57

BATES PARK ACCOUNT.

Balance from 1894	\$6 39
Appropriation	50 00
	<hr/>
	\$56 39
Expended for labor	15 17
	<hr/>
Undrawn	\$41 22

BURTON PARK ACCOUNT.

Balance from 1884	\$3 09
Appropriation	50 00
	<hr/>

Expended for —

Posts, wire and lumber for fences.....	\$39 97
Labor.....	26 80
	<hr/>
	66 77
Overdrawn	<hr/> \$13 68

BEACH PARK ACCOUNT.

Balance for 1894	\$15 04
Appropriation	50 00
	<hr/>

Expended for —

Labor.....	\$7 74
Hose	6 00
Lumber and labor for plank walks.....	23 50
Plymouth Water Works	1 00
	<hr/>
	38 24
Undrawn	<hr/> \$26 80

TRAINING GREEN ACCOUNT.

Balance from 1894	\$25 37
Appropriation	150 00
	<hr/>

Expended for —

Labor on walks and rolling grass	\$26 37
Removing and replacing board walks	8 63
Care of grounds by B. E. Blackmer.....	125 00
	<hr/>
	160 00
Undrawn	<hr/> \$15 37

BURTON PARK.

The appropriation for Burton Park not being enough to pay for the fences erected on the northeast and northwest sides and around the gully which has been planted with small shrubs and grass seed, the Commissioners have overdrawn the account \$13.68 and ask you to approve the same. On the other four accounts there is a total sum undrawn of \$90.96.

Burton Park would be much improved by setting out shrubs, for which a small annual appropriation is needed for a few years.

BATES PARK.

On the larger part of Bates Park more depth of soil is needed to ensure the support of a good lawn, but no soil has been offered this year at a price low enough to justify its purchase. There seems nothing more appropriate than grass and a few trees and shrubs for this park. Some increase in the sum to its credit is desired, that soil may be procured whenever it can be done to advantage. It is probable that some fencing may be needed next year.

BEACH PARK.

At Beach Park, a plank walk has been built, extending from the wooden driveway to the shelter Pavilion. The waiting-room and the Pavilion have served their purposes very well.

This fourteen hundred feet of sandy sea-shore is much used by the townspeople and visitors from other places.

MORTON PARK.

Morton Park, after seven years' ownership by the Town, though only a woodland with large ponds, shows prominent marks of difference from any and all other woodlands in the

Town, by reason of the care that has been used to encourage the growth of the better trees and the removal of the inferior ones, without materially changing the natural woodland aspect of the scenery, and also on account of the improvements made in roads and paths. This park has become one of the principal attractions to visitors to the Town. They enjoy its quiet wildness and natural beauty, and contrast it favorably with parks in other places.

The money appropriated this year has been mostly expended in keeping the roads and paths from deteriorating. Some small white pines have been set out at no cost except for labor, and many promising young trees of pine and beach have had room made for them by removing inferior trees which would retard their growth.

The growth of the chestnut and white pine groves is rapid beyond anything that could be anticipated.

There is in this park an abundance of good gravel and some coarse stone. Whenever money is available to pay for the labor of using these materials, it will be easy to make improvements of a more permanent character than has been practicable in the past.

When the road on the west side of Little Pond, called Little Pond Drive, was first marked out by cutting away the trees and bushes, Mr. Harold Whiting volunteered to grade it roughly at his own expense. He did so, and used it one season in driving to and from his summer home at Billington Sea before the Park Commissioners expended any money in grading it. Mr. Benjamin M. Watson has suggested that it would be appropriate to change the name from Little Pond Drive to Harold's Way. The suggestion is gladly received by the Commissioners, and hereafter that route is to be called Harold's Way, in memory of one who, by the uprightness of his character, the simplicity, sincerity and kindness of

his intercourse with our people, the refreshing and inexhaustible enthusiasm so freely displayed in his love of Plymouth and the region around Billington Sea, endeared himself to all who knew him.

In order to learn how much the beach trees in the park grow yearly, measurements have been taken of the circumferences of twenty trees for six years, and of ten other trees for shorter periods. The preferred height for measurement is found to be about the height of the measurer's shoulder, higher or lower if the limbs interfere, the exact spot on each tree being marked, generally by a large-headed tack nail.

The trees selected varied in size from two inches in diameter to thirteen inches. The greatest growth for any year of a single tree was one and one-half inches, or about one-half an inch in diameter. The average yearly growth of twenty trees in five years was one-quarter of an inch in diameter.

TRAINING GREEN.

Training Green is a constant reminder of the wisdom of the Town in changing it from a neglected "commom" into attractive grass plots and useful paths, surrounded by a plain, yet appropriate and secure stone curbing. It has been neatly kept by Mr. Blackmer.

It has been frequently suggested that our roads would be much, less sandy if a belt of protecting trees was left on each side. This is demonstrated by the fact that most of the very sandy pieces of road are where there is little shade, and also by the rapidity with which a fair piece of road becomes sandy when the wood is cut off from the neighboring lots.

Some owners of woodland show their public spirit by leaving trees uncut along the roadside, and doubtless more

would do so if they realized the considerable benefit they would confer on the community by so doing, and the small personal loss they would incur.

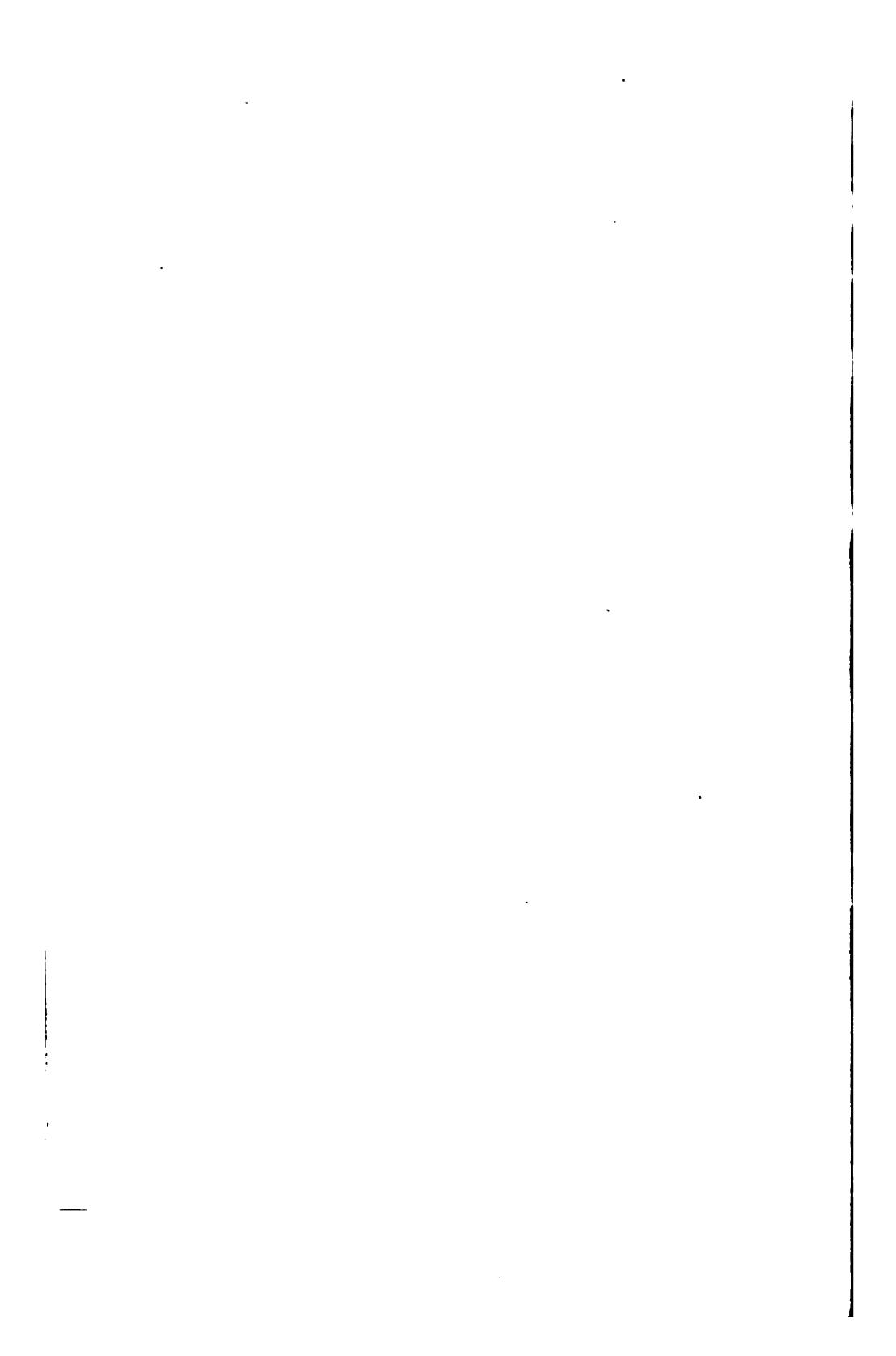
To illustrate these points let us take the case of a wood-lot bordering on a highway on both sides for one-quarter of a mile. If the owner, when cutting this lot leaves strips one rod wide uncut, he would probably leave standing eight or ten cords of wood which might have a market value of \$5 or \$10, according to location. This money would not be lost, as the wood would still be available for use in case of necessity, and these belts would easily supply considerable fire-wood without injury to their use for shade; the owner would simply postpone realizing on an acre of his lot.

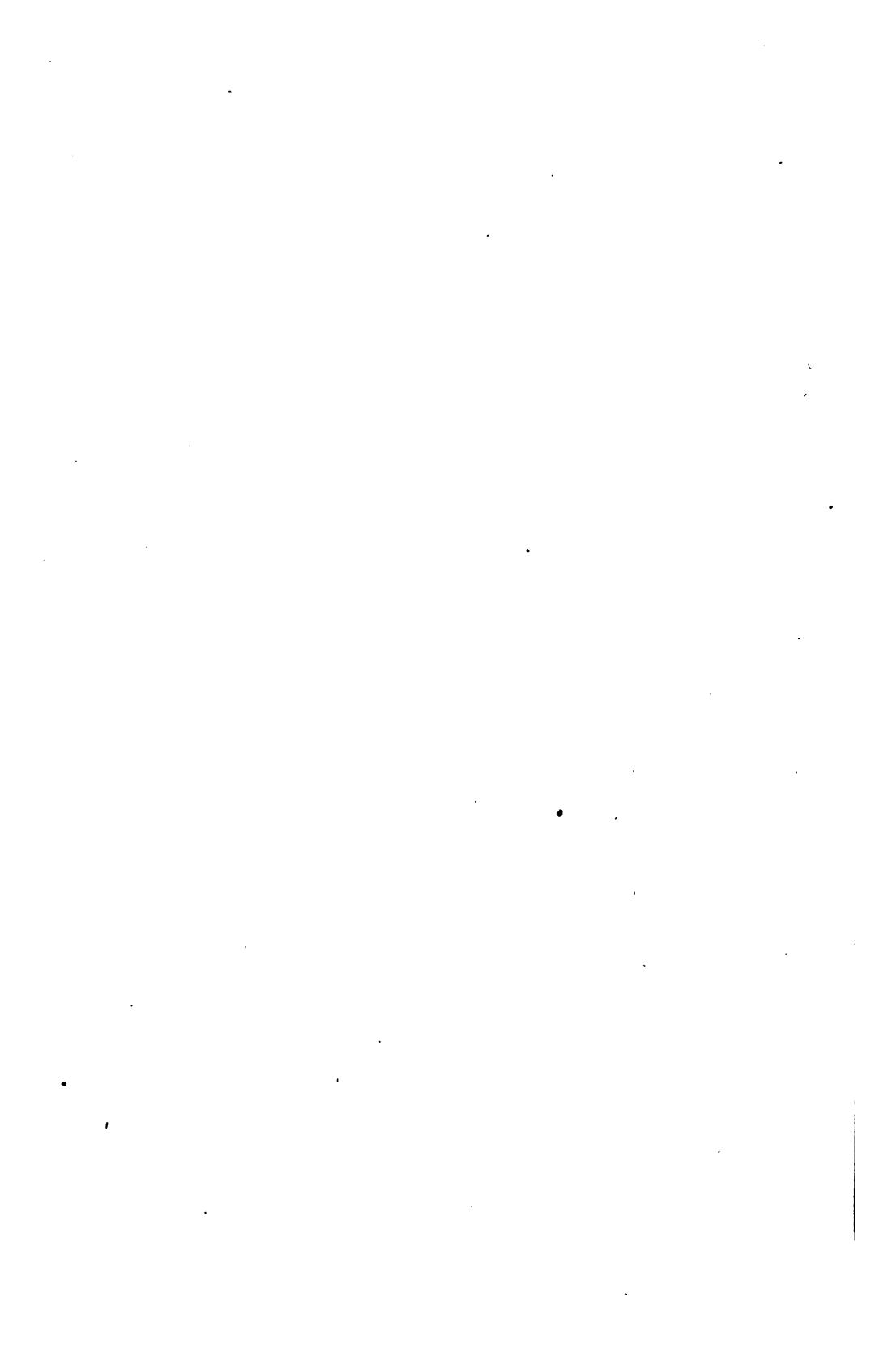
We ask the Town to appropriate the same amounts for each park and for Training Green as were vote in 1895.

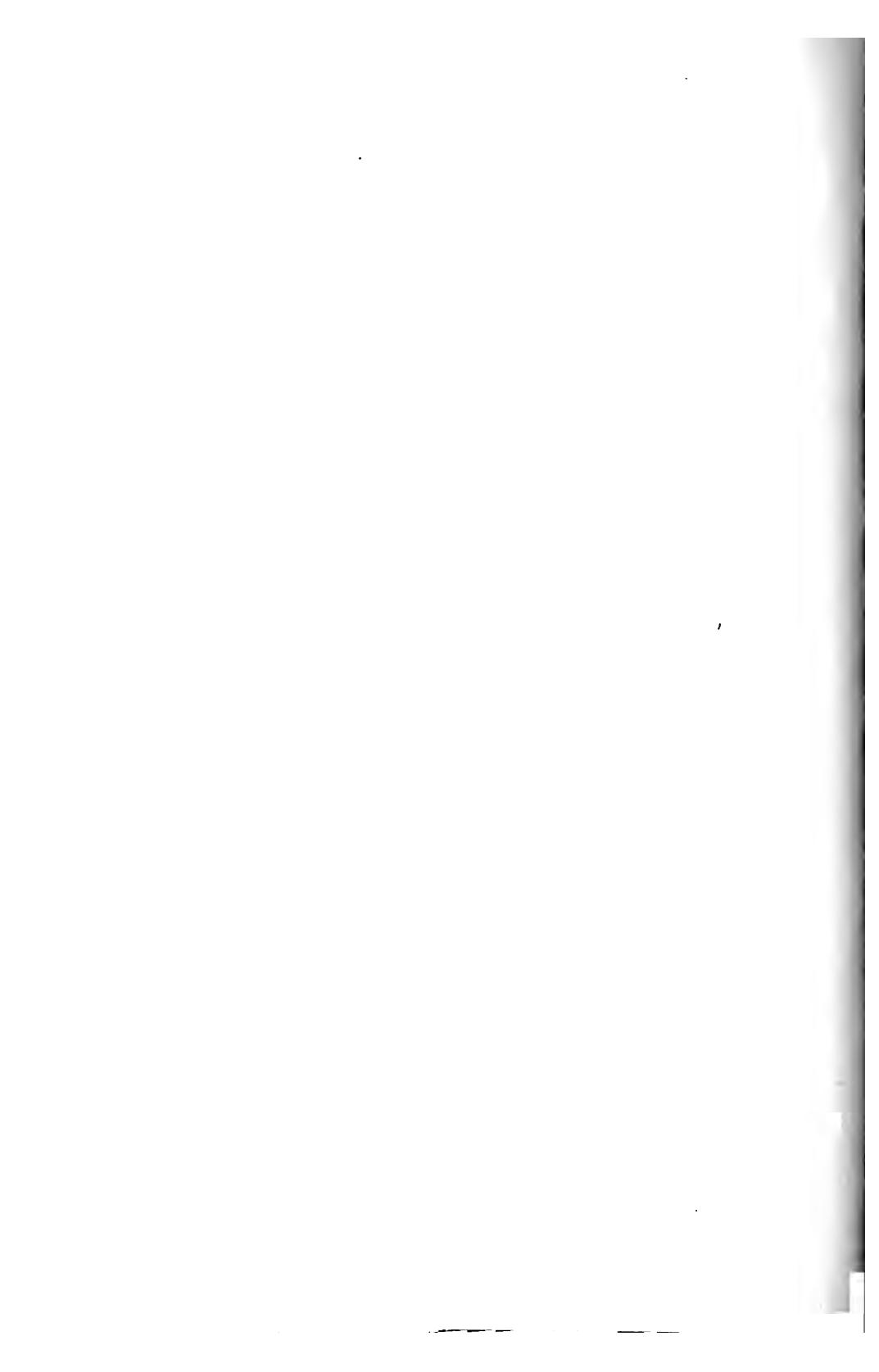
Respectfully submitted,

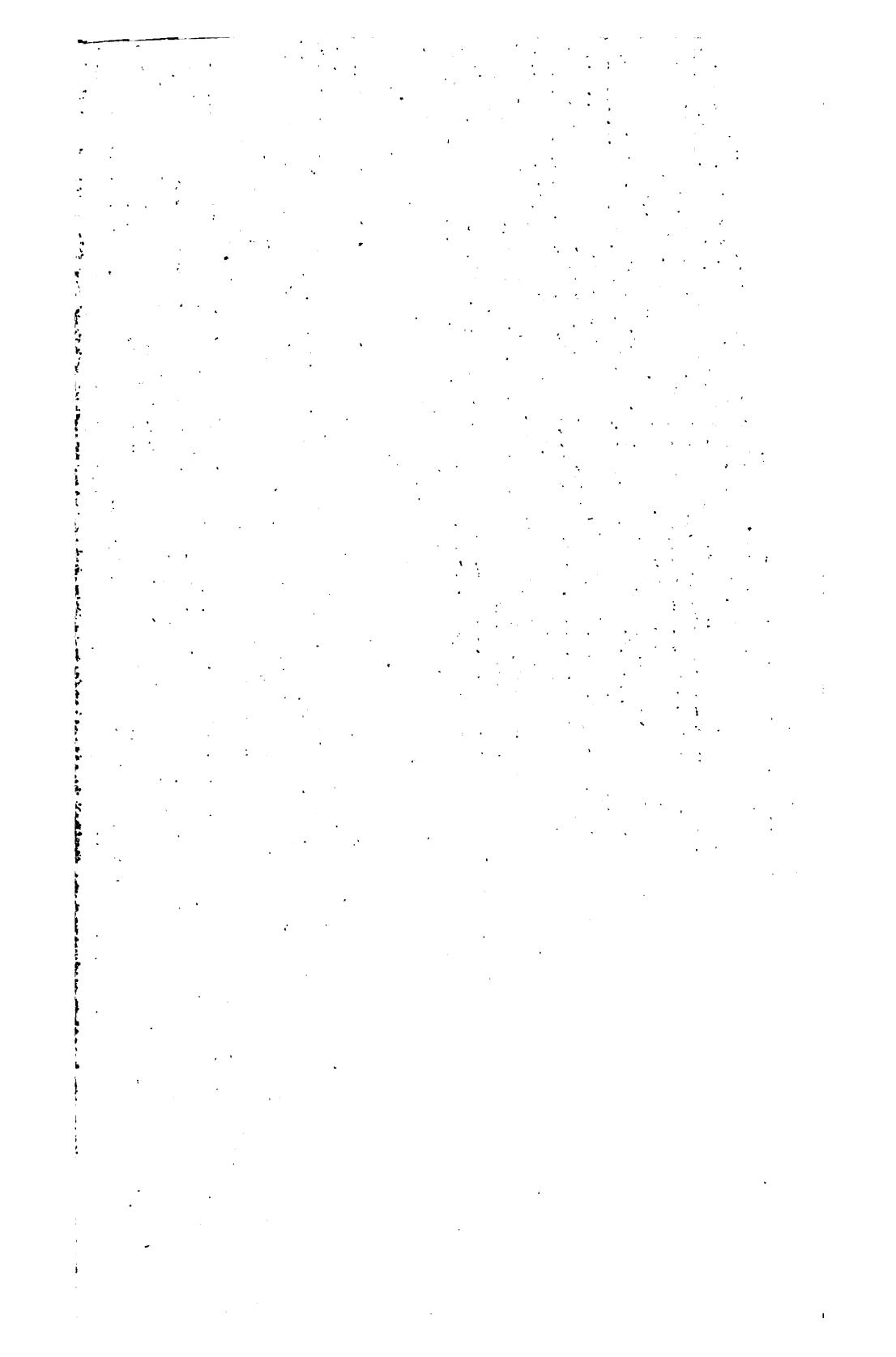
NATHANIEL MORTON,
HENRY O. WHITING,
GEORGE R. BRIGGS,
} *Park Commissioners.*

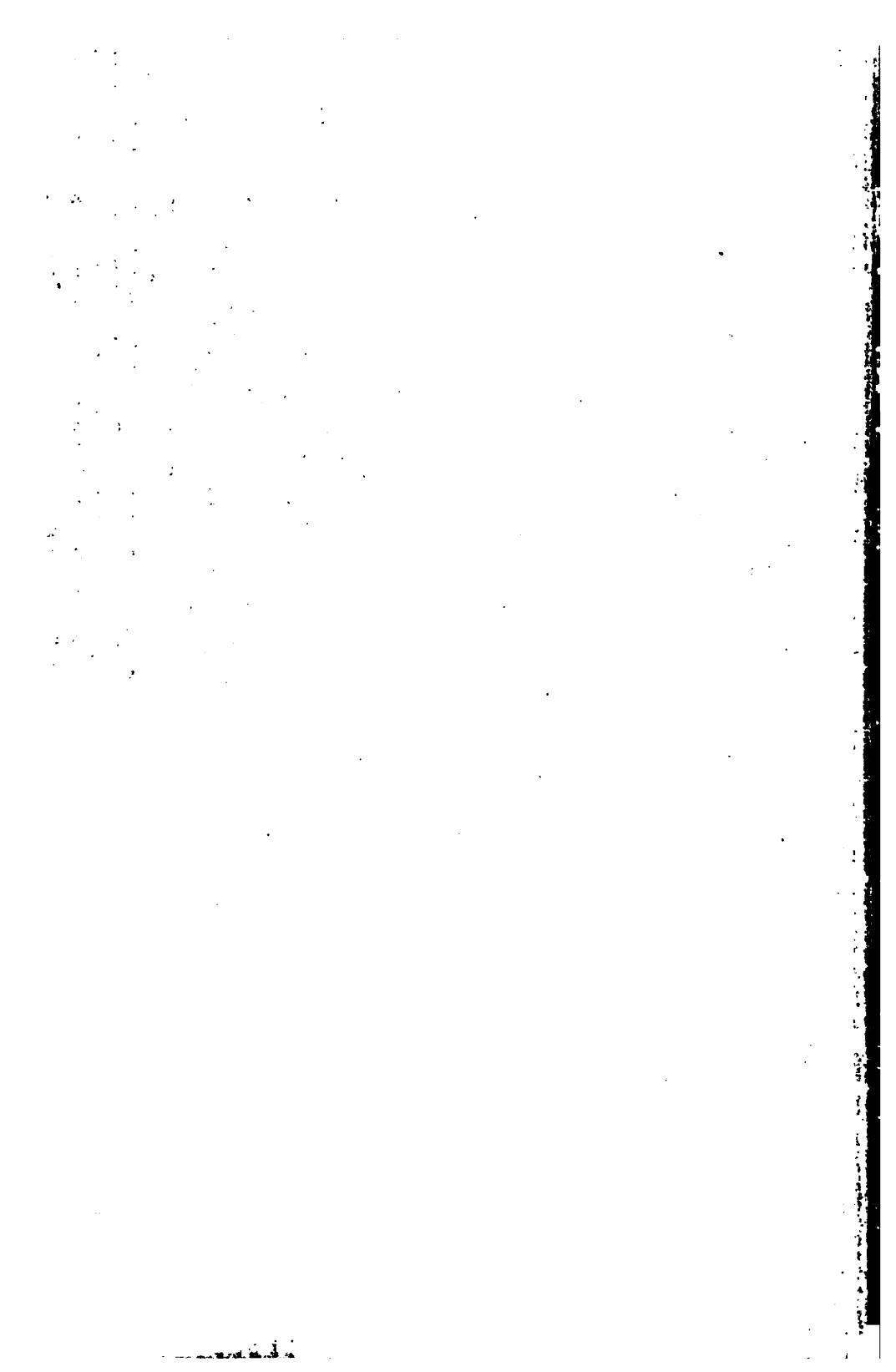
PLYMOUTH, MASS., January, 1896.







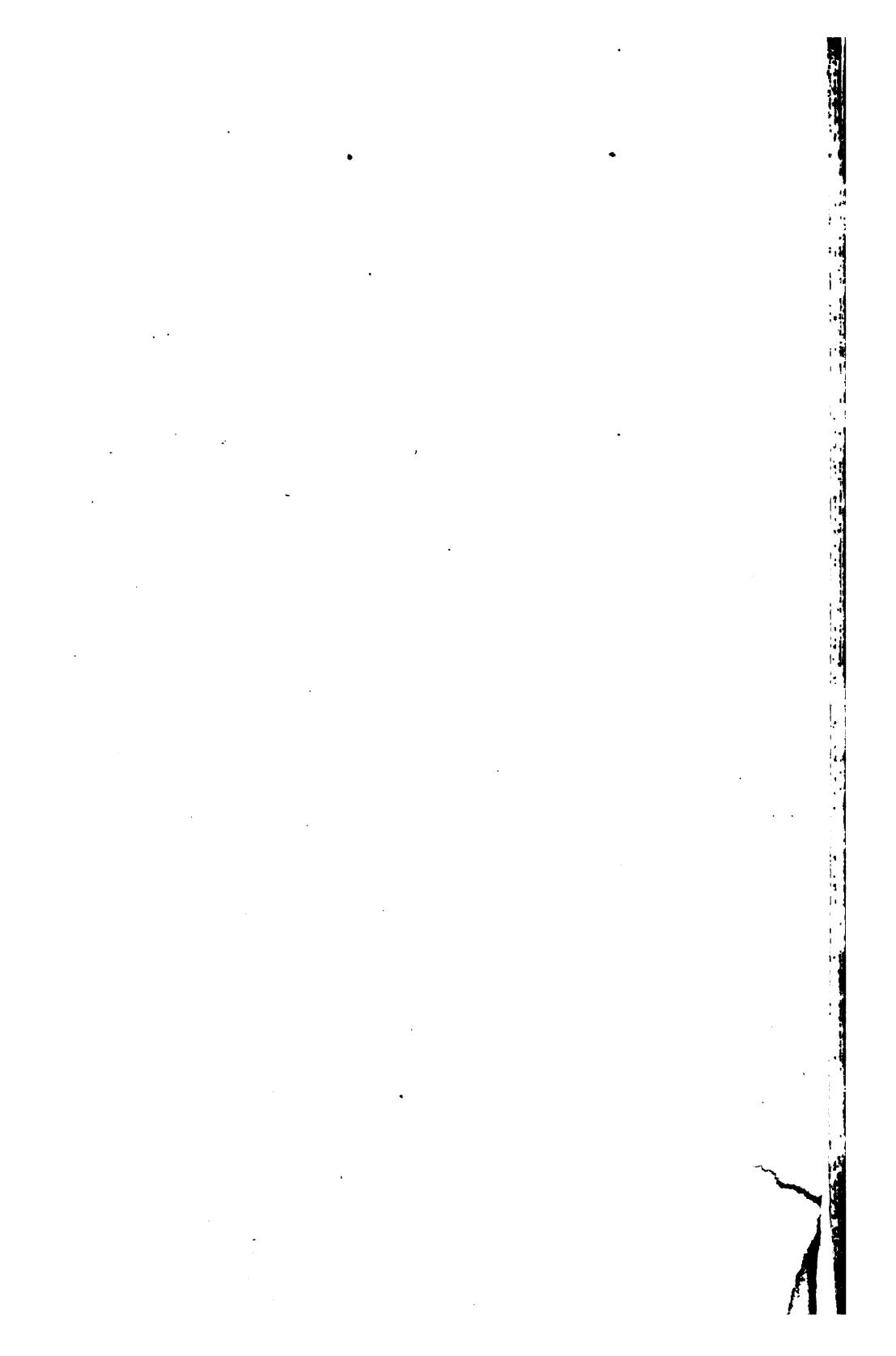




REPORT
OF THE
PARK COMMISSIONERS
OF THE
TOWN OF PLYMOUTH

FOR THE YEAR 1896.

PLYMOUTH:
AVERTY & UOTER, BOOK AND JOB PRINTERS.
1897.



~~EIGHTEEN~~

ANNUAL REPORT

OF THE

PARK COMMISSIONERS

OF THE

TOWN OF PLYMOUTH —

FOR THE YEAR 1896.

COMPLIMENTS OF

NATHANIEL MORTON.



~~EIGHTEEN~~

ANNUAL REPORT

OF THE

PARK COMMISSIONERS

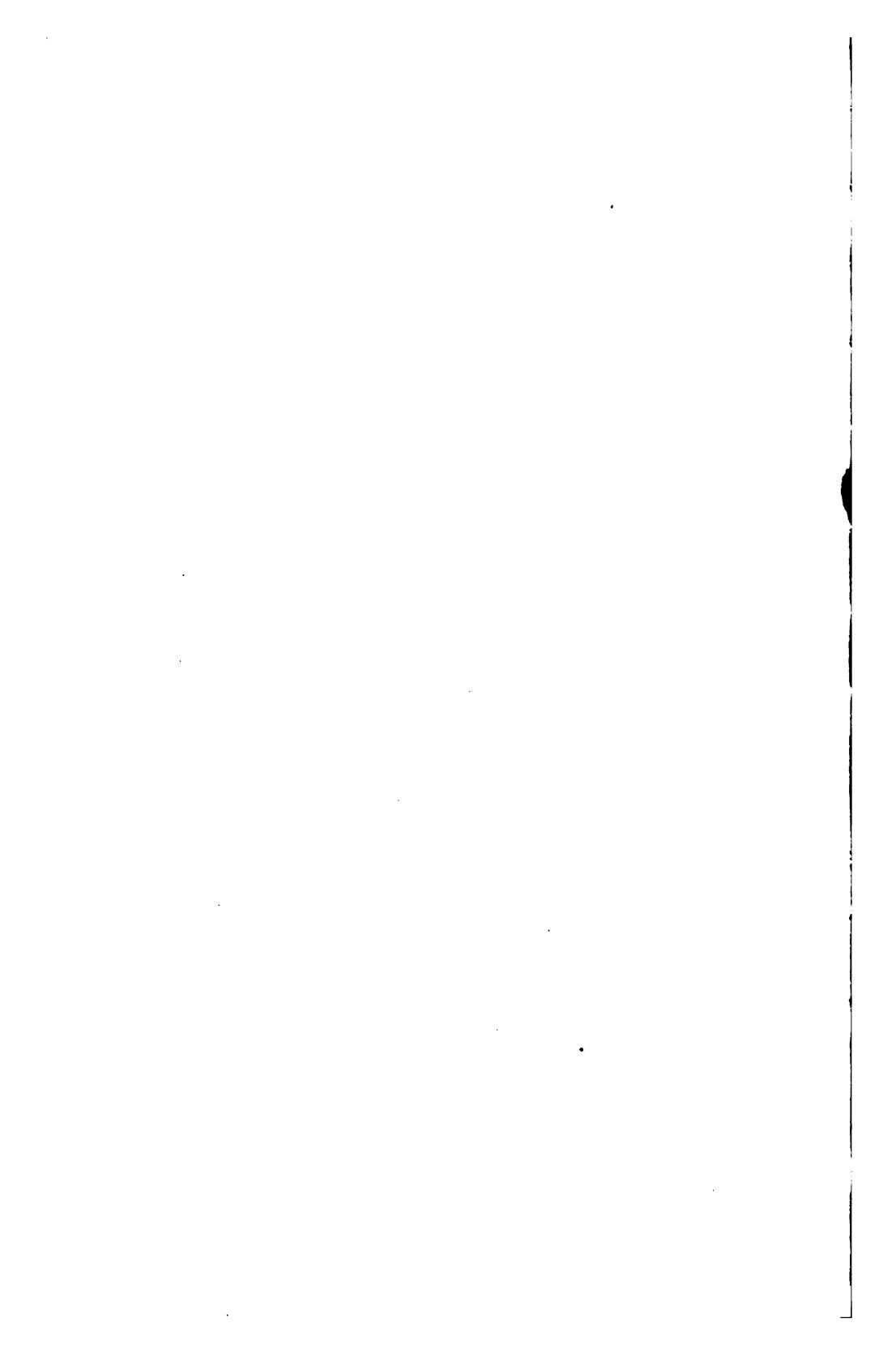
OF THE

TOWN OF PLYMOUTH —

FOR THE YEAR 1896.

PLYMOUTH:

AVERY & DOTEK, BOOK AND JOB PRINTERS.
1897.



EIGHTH ANNUAL
REPORT OF THE PARK COMMISSIONERS

To the Inhabitants of the Town of Plymouth.

MORTON PARK ACCOUNT.

Balance from 1895	\$7 21
Appropriation	350 00
Donation of Geo. P. Hayward for trees.....	10 00
Sale of two cords of wood.....	6 00
<hr/>	
	\$373 21

Expended for—

Labor.....	\$359 76
Trees from T. R. Watson.....	10 00
Signs	1 40
Tools and grass seed.....	10 70
Printing park reports	7 00
<hr/>	
	388 86
<hr/>	
Overdrawn	\$15 65

BURTON PARK ACCOUNT.

Appropriation	\$50 00
Expended for—	
Overdrawn account of 1895.....	\$13 70
Labor, \$10.85 ; grass seed, \$1.24.....	12 09
Trees from T. R. Watson	1 60

	27 39
 Undrawn	

	\$22 61

BATES PARK ACCOUNT.

Balance from 1895.....	\$41 22
Appropriation	50 00

Total	
	\$91 22
 Expended for—	
Labor and cartage.....	\$111 17
Removing and replacing board walks.....	3 85
Fertilizer, \$2.00 ; grass seed, \$5.25	7 25
Flowers and flower seed.....	5 03

	127 30
 Overdrawn	

	\$36 08

BEACH PARK ACCOUNT.

Balance from 1895.....	\$26 80
Appropriation	50 00
Received for bath-house permits.	4 00

	\$80 80

Expended for—

Labor.....	\$9 82
Painting settees, \$6.84; plumbing, \$4.33...	11 17

	\$20 99

Undrawn balance.....	\$59 81
----------------------	---------

TRAINING GREEN ACCOUNT.

Balance from 1895.....	\$15 37
Appropriation	150 00
Lawn mower sold	1 00

	\$166 37

Expended for—

Labor on gravel walks.....	\$9 95
Removing and replacing board walks.....	11 02
Mowing machine.....	9 00
Grass seed.....	8 79
Labor and care of B. E. Blackmer.....	125 00

	163 76

Undrawn	\$2 61
---------------	--------

MORTON PARK.

Nearly all the money expended at Morton Park has been used in repairing and improving the roads and paths.

About one hundred dollars was used in grading the hill at the southerly end of Highland Road. This hill has always been considered too steep for safety, but heretofore the annual appropriations have been needed

for other improvements which seemed equally or more important. The grade of the road is now easy, and the appearance of that part of the park is much improved.

Highland Road and the paths that go out from it lead to the most attractive places of their kind in the park. Here may be found the finest wooded slopes, the steepest hill, the deepest dell, the densest shade and varieties of flowers and ferns not found elsewhere in the park.

It is a well-known fact in forestry cultivation that white pine and pitch-pine trees grow best when no trees are near enough to touch them with their limbs, or shade them during the middle half of the day. Although the oak largely predominates in Morton Park (and we hope it always may to a reasonable extent), there are thousands of pines, large and small, growing among the oaks. Every year some of the oaks have been cut to make room for the pines; but this year such cutting has been done more thoroughly than ever before. This kind of trimming, continued every year, will soon bring in a fair proportion of evergreen foliage which will add much to the beauty of the park, especially when the oaks are not in leaf.

Mr. George P. Hayward very kindly gave money to purchase black spruce and balsam fir trees, not native to our woods. About twenty-five of each kind are growing in the park.

This park is wild in its nature and the shrubbery so abundant that it has not been considered necessary to put any restrictions on picking or cutting flowers and common shrubs; but we do now earnestly request that hereafter no evergreen trees or shrubs be in any way interfered with, as the loss of any of the hemlock,

white pine, pitch-pine, spruce and balsam fir trees, which we have planted or are trying to develop, would be an injury. We ask every visitor to the park to help us to maintain the evergreens.

In the Fall of 1895 a large number of white oak acorns were planted in places where a new growth of oak would be desirable. Many of the acorns sprouted last Spring, and a fair proportion of the sprouts are now alive. This Fall more acorns were planted. If such planting can be continued every year, it is hoped that the somewhat distant future will show that this kind of work gives valuable results at little cost.

The main entrance to Morton Park from Summer Street, known as Little Pond Lane, for about a thousand feet is over lands of Mrs. Mary R. Watson and Mrs. Caroline C. Finney, the Town having only a right of way. As it seems very desirable that this entrance should become a part of the park, a survey of the premises has been made (gratuitously by our worthy Ex-Park Commissioner, Walter H. Sears) and definite bounds placed for laying out this part of the lane. Mrs. Watson has generously offered to give the part of her land included in the lay-out, and Mrs. Finney will give her portion on condition that the Town will erect and maintain suitable fences on her line, if any should be needed. The location will be duly filed with the Town Clerk, and the Town will be asked to accept and allow the same for an addition to Morton Park.

Some of the most valuable trees have been injured this year, presumably by gunners returning from the hunt by way of the park, with unused charges in their guns which they desired to get rid of; they have taken the smoothest and best tree trunks for targets, probably not thinking of

the damage they were doing, and possibly not knowing that for discharging a gun in the park, they were liable to a fine of three dollars to twenty dollars for each offence.

BATES PARK.

When Union Street was widened some good soil was obtained for Bates Park for the cost of cartage. This park being much in need of soil, and the opportunity to get it at so good advantage being rare, the appropriation asked for by your Commissioners for this park was exceeded in the cost of the work. The appropriation made by the Town this year was a lump sum for all parks. Under the circumstances, it seemed proper to use the money needed at this park, so long as the whole appropriation was not exceeded. The soil carted covered about two-thirds of the surface of the park four to six inches in depth, which, with the soil previously there, makes very good support for grass. This has been sown with grass seed. The improvement should be continued to cover the remaining third when more soil can be obtained to advantage.

The plants which Commissioner Lanman placed in this park, and the special care he gave to it, were much approved of by the neighbors and visitors.

BURTON PARK.

This park would seem to serve its purpose best if planted with hardy shrubs and dwarf trees, requiring but little outlay after becoming well established. Your Commissioners wish to plant as much of this work as is possible the coming season.

BEACH PARK.

This park continues to be an attractive resort. The undrawn balance in the account is liable to be called upon at any time to repair damages to buildings and walks, on account of possible encroachments of the sea.

TRAINING GREEN.

The Green has had the customary excellent care by Mr. B. E. Blackmer. There is a continued annoyance by dogs of the neighborhood, which seem to make these beautiful grounds their special place of rendezvous. They dig up the grass, especially the young grass on newly sown places. They romp and race with each other by the hour, doing much damage. On the coming of Mr. Blackmer they disappear, and return as soon as they see that he has gone. If the owners of the dogs would find some means to abate this nuisance, they would receive many thanks.

In mid-summer the grass on the Green began to turn brown, and later large patches died. Many small ants were found in these places, from which it might be inferred that they were the cause of the damage. Those whom we accept as good authority in such matters say that the action of such ants is a benefit to a lawn.

We take the liberty of making a few extracts from *Garden and Forest* of November 18th and 25th, 1896, copies of which are now on file at the Public Library, giving a very full and interesting account of the insects which destroy grass, and of some remedial measures that may be used.

"Land cultivated in one kind of crop for many years successively tends to attract all the different kinds of insects that feed upon it."

"Farmers have long known that after land has been in pasture for a few years, or has been long mowed, the grass 'runs out.' They accept this fact and act upon it without much questioning as to just what this running out consists of; but in many cases the land has become so thoroughly infested with grass-feeding insects that the roots are no longer able to support a growth. Insects are not confined to farms or farm lands; they occur wherever plants are grown," "and are troublesome even to the little patch of lawn in front of the house."

"Insects of almost all orders are found in grass lands." "In the order Lepidoptera, we find among the moths a series of little species known as Crambids, many of which live in the larval stage on grass, either at the surface or just below it, feeding upon the roots or cutting off the stalks just at the level of the ground."

"Perhaps the most common and destructive of the larvae found in lawns are white grubs, the larvae of several species of leaf-horned or Lamellicorn beetles." "Ordinarily when we find a white grub, nearly a quarter of an inch in diameter and somewhat more than an inch in length, without any hairy covering, we can take it for granted that it is the larvae of one of the May-beetles."

"Their eggs are laid in the ground itself among the roots of the grass, and the larvae when they hatch at once begin feeding. They live for two or three years in this stage, growing very slowly, and, on the whole, not eating very ravenously." "An old sod is, however, very apt to become infested by successive broods, and much damage may then be done, the roots being in some cases eaten off clean, and the grass becoming brown on the surface, and

eventually dying." This is what seems to have happened at the Green.

"Remedial measures." "One of the simplest measures is frequent cutting and rolling." "The grass should be always kept well fed," "using no barnyard manure." "Lawns should be fed almost entirely with mineral fertilizers" "to furnish the necessary nitrogen and potash."

The article goes on to describe the method that has been successfully used in applying kerosene emulsion to small lawns to kill all underground insects.

The Green will need to be newly seeded next Spring, and probably some other extra expense incurred to try to prevent the continuance of this trouble.

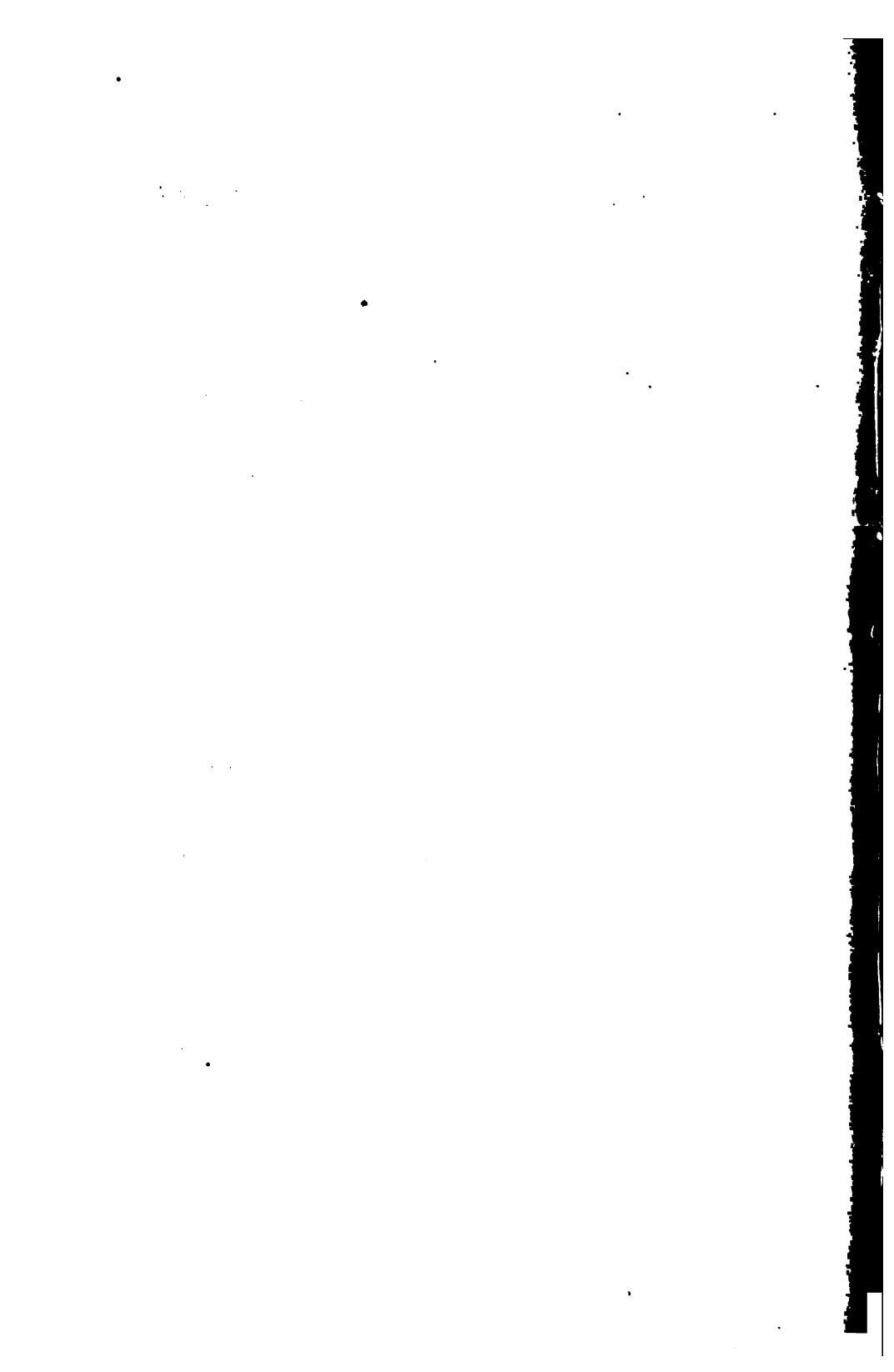
We ask you to appropriate the following sums for the year 1897:

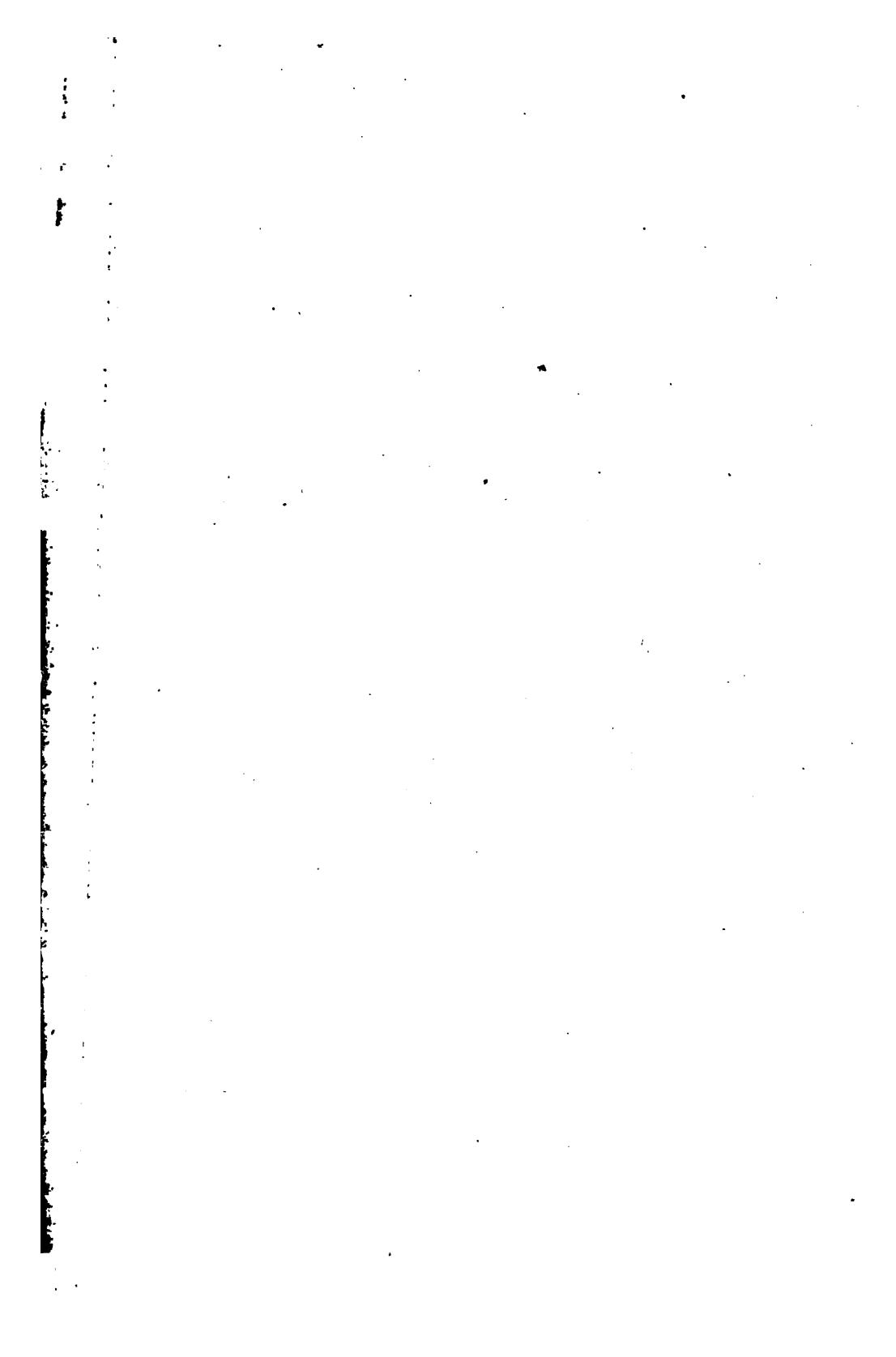
For Morton Park.....	\$350 00
Bates Park.....	50 00
Beach Park.....	50 00
Burton Park.....	50 00
	———— \$500 00
Training Green.....	200 00

Respectfully submitted,

NATHANIEL MORTON,
GEORGE R. BRIGGS,
FRANK H. LANMAN.

PLYMOUTH, MASS., February, 1897.







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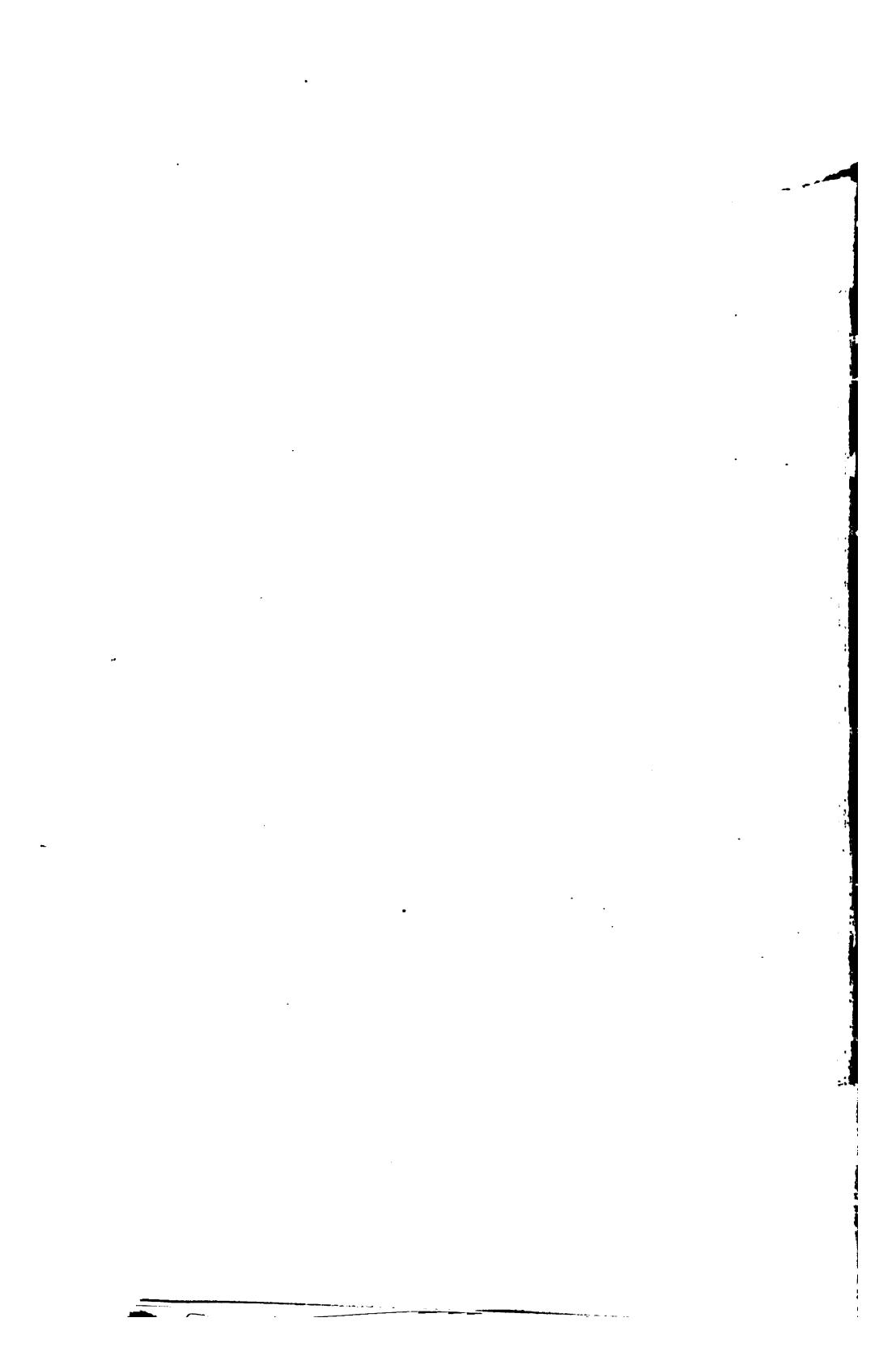
REPORT
OF THE
PARK COMMISSIONERS

OF THE
TOWN OF PLYMOUTH
MASS.

FOR THE YEAR

1897.

PLYMOUTH:
AVERY PRINTING COMPANY.
1898



REPORT

OF THE

PARK COMMISSIONERS

OF THE

TOWN OF PLYMOUTH

MASS.

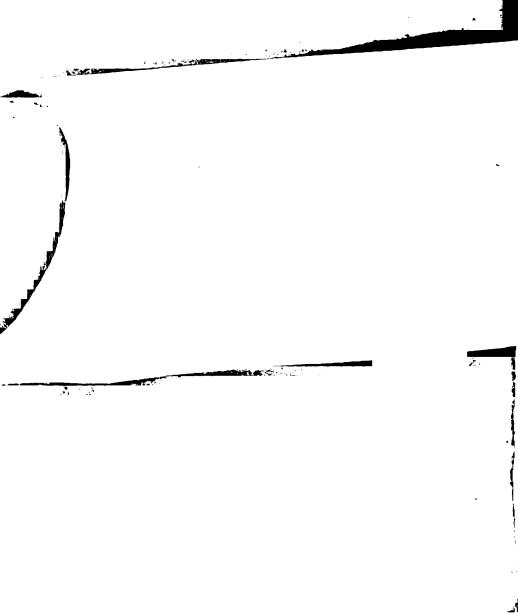
FOR THE YEAR

1897

COMPLIMENTS OF

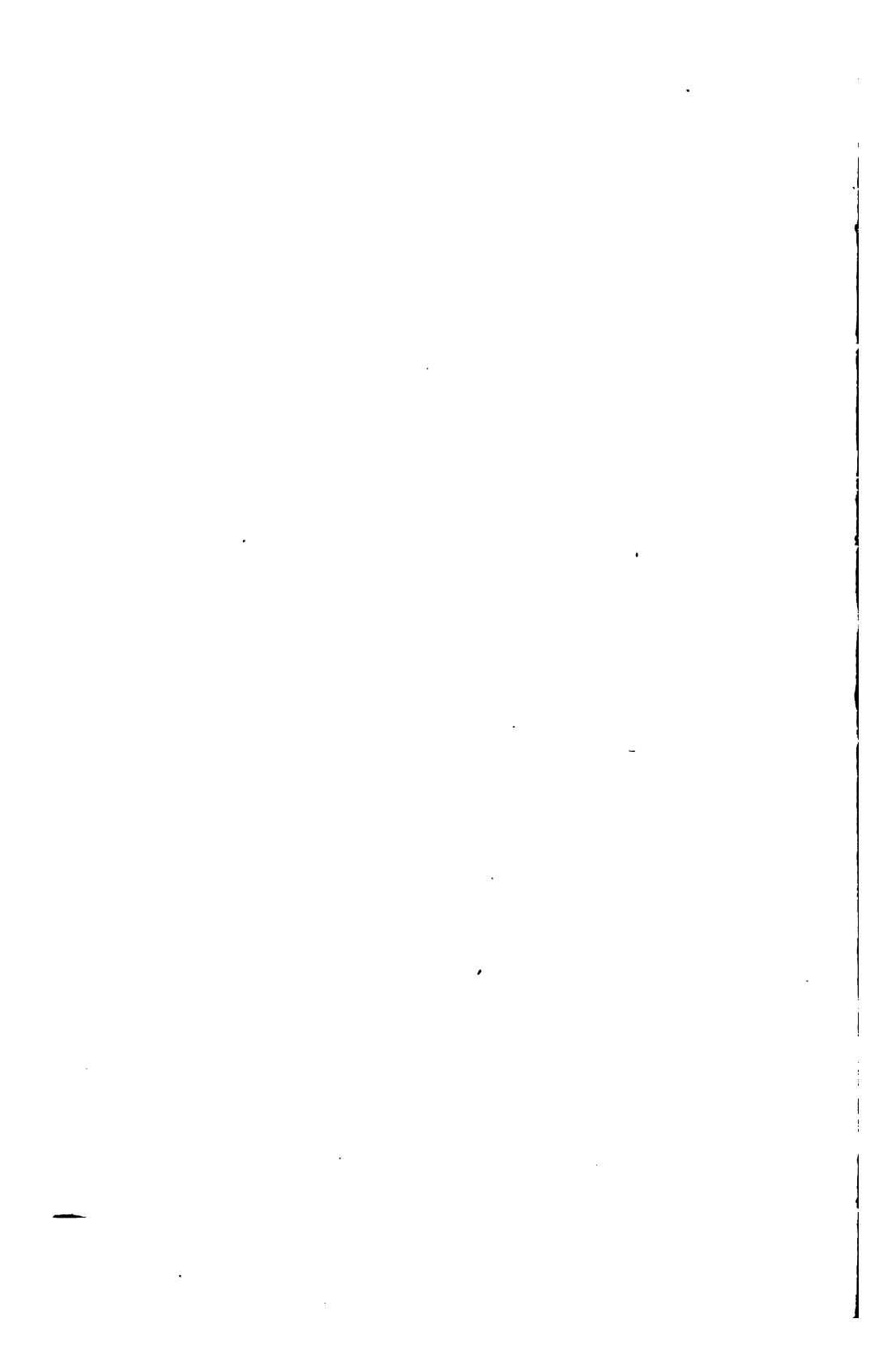
NATHANIEL MORTON.

PLYMOUTH:
AVERY PRINTING COMPANY.
1898



REPORT
OF THE
PARK COMMISSIONERS
OF THE
TOWN OF PLYMOUTH
MASS.
FOR THE YEAR
1897.

PLYMOUTH:
AVERY PRINTING COMPANY.
1898



NINTH ANNUAL REPORT OF THE PARK COMMISSIONERS

To the Inhabitants of the Town of Plymouth.

The appropriations made by the Town for parks for the last two years have been lump sums.

The Commissioners have thought it best to devote a special sum to each park, and to keep an account of the expenses for each park.

At the beginning of the year the balance between our undrawn and overdrawn park accounts was \$30.69 undrawn, which agreed with the balance of the Town Treasurer. The balance undrawn on the four park accounts this year is \$170.48.

MORTON PARK ACCOUNT.

Part of appropriation of 1897.....	\$350 00
Expended for--	
Overdrawn balance of 1896	\$15 65
Labor.....	286 30
Lumber for bridge.....	15 81
Stakes and wire to protect trees	13 17
Stone for bounds to Little Pond Lane	7 00
Tools	3 20
Undrawn	8 87
	<hr/>
	\$350 00

BURTON PARK ACCOUNT.

Undrawn balance of 1896.....	\$22 61
Part of appropriation	50 00
	<hr/>
Expended for—	
Labor	\$2 80
Stakes	1 00
	<hr/>
	3 80
Undrawn.....	\$68 81

BATES PARK ACCOUNT.

Part of appropriation.....	\$50 00
Expended for—	
Overdrawn balance of 1896. . .	\$36 08
Labor.....	1 38
	<hr/>
	37 46
Undrawn	\$12 54

BEACH PARK ACCOUNT.

Undrawn balance from 1896	\$59 81
Part of appropriation.....	50 00
Received from bath-house permits.....	3 00
	<hr/>
	\$112 81
Expended for—	
Labor.....	\$4 90
Stock and labor repairing platform...	26 90
Plumbing.....	75
	<hr/>
	32 55
Undrawn	\$80 26

TRAINING GREEN ACCOUNT.

Balance from 1896	\$2 61
Appropriation.	200 00

	\$202 61
Expended for labor	\$33 15
Printing	7 50
Grass seed, \$5.00; ashes and hen manure, \$19.20	24 20
Removing tree, \$22.95; two new trees, \$0.80; bolting tree, \$1.	24 75
Labor and care of B. E. Blackmer.	125 00

	214 60
Overdrawn.	_____
	\$11 99

MORTON PARK.

The location of a part of Little Pond Lane, as an addition to Morton Park, was accepted and allowed by the Town April 3, 1897. The lands taken by this location were conveyed to the Town by deeds of Mrs. Mary R. Watson and Mrs. Caroline C. Finney, recorded in book 743, pages 14 and 15, Plymouth Registry. The additional land thereby gained without expense to the Town, at the junction of Little Pond Lane and Summer Street, makes it easy to form an attractive entrance to the park. This entrance is very little more than one mile from the central post-office of the Town, so that twenty minutes' walk will take one from the business centre of the Town to the border of our park which practically contains 500 acres of land and water and is equal if not superior in natural beauty to any similar tract in our township.

The larger part of the labor of grading this entrance to Little Pond Lane has already been done. The money available to be expended upon the other roads and paths was no more than enough to keep them in repair. The bridge at "Bill Holmes' Dam" has been covered with new plank this year.

Some laurel-leaved willow cuttings have been set along the margin of the brook. The fine lot of ten to twenty-year-old pitch-pines at the old grove, and the chestnut and white pine groves continue their exceptionally rapid growth.

One of the finest beech trees in the park has been seriously damaged by gatherers of autumn foliage, who cut off half way to the trunk, all the lower limbs on one side. When a large beech tree has had room to grow unstinted, its lower branches bending to the ground form one of its chief beauties, and by the mutilation of the lower branches the tree is injured past recovery.

The Commissioners wish to avoid restrictions on the free-use of the park by the public, but they earnestly ask all persons to consider the injury that trees may suffer through the acts of thoughtless pleasure-seekers.

It is necessary to cut off the lower limbs of some trees standing very near the roads, especially some of the white pines whose low-spreading limbs and thick foliage, if allowed to remain, would shut out inland views which it is very desirable to maintain. It may be interesting to some of our readers to know what seems to us, after eight years' experience, to be the best way to trim white pines in order to make smooth trunks and the best lumber. The history of the trimming of one tree is all that is necessary to show how the healing principle in the tree acts in closing up a wound caused by removing a limb.

A thrifty young white pine stood so near a road that several of the lower limbs touched the wheels of passing vehicles. Four years ago these limbs which were about one-fourth to three-eighths of an inch in diameter were cut off with a knife as close to the trunk of the tree as was possible without scarring the bark of the trunk, or the enlargement that often forms where the limb joins the trunk. Two years ago several limbs upon other sides of the tree were cut off, special care being taken to cut into the bark of the trunk enough to leave a scar about twice the diameter of the limb. New bark has closed over the places where limbs were cut off two years ago, but where the limbs were so carefully cut four years ago, holes about half an inch in depth have been formed in the trunk of the tree by its natural growth.

This method of cutting into the bark of the trunk has been used on other trees in trimming limbs of all sizes up to four inches in diameter, and the scars are becoming covered with new bark so rapidly that we are convinced that a perfect covering will soon result.

We shall be pleased to show to any persons interested the results of several different ways of trimming white pine trees.

BATES PARK.

The part of the appropriation devoted to Bates Park was nearly all used in paying the overdraft of that park of the year 1895, caused by covering a part of it with soil. It could not be given proper care this year without again overdrawing its account, to the detriment of other parks, which need all the undrawn balances, besides a share of the usual annual appropriations.

BEACH PARK.

Beach Park with its 1,400 feet in length of sea beach, its pavilion and waiting-rooms, has well served its purpose.

The planked driveway may need to be renewed soon. It has been covered with boards to try to preserve it a year or two longer without other expense.

BURTON PARK.

The appropriation came too late to make improvements designed for Burton Park last spring. This park does not need the closely clipped lawn as do Training Green and Bates Park. The best results can be obtained from this rugged piece of hillside by the addition of a few trees and many shrubs to the wild grasses and flowers which cover the most of its surface. This park can be made an attractive as well as a prominent feature in the landscape, as seen from Sandwich Street.

TRAINING GREEN.

Seeding anew and giving a good coat of wood ashes to the parts of Training Green where worms had destroyed the grass roots in 1896, and using hen manure on the other parts, renewed the grass upon the whole of the Green. The season was without the usual long drought so that the Green never looked better throughout a summer than it has this year.

It is a matter of congratulation that the Green is serving its purpose so well. It has been suggested that the Green might serve its purpose better if more trees should be grown to shade the walks, and enough seats be placed to make it a pleasant resort in warm weather. Even the few seats now

used upon the Green are detrimental to its ornamental value, but their use as resting places for the infirm, and those waiting for electric cars, seem to make it right to retain them. Should the Green become a pleasure resort it would be impossible to protect the grass, or to keep the walks and lawns clean, without the constant service of one or more persons, the expense of which would be too great to bear. "No man can serve two masters;" neither can this small plot of ground, kept as a spot of special beauty, with convenient crossings for travel, be devoted to any other purpose without losing most of its present value.

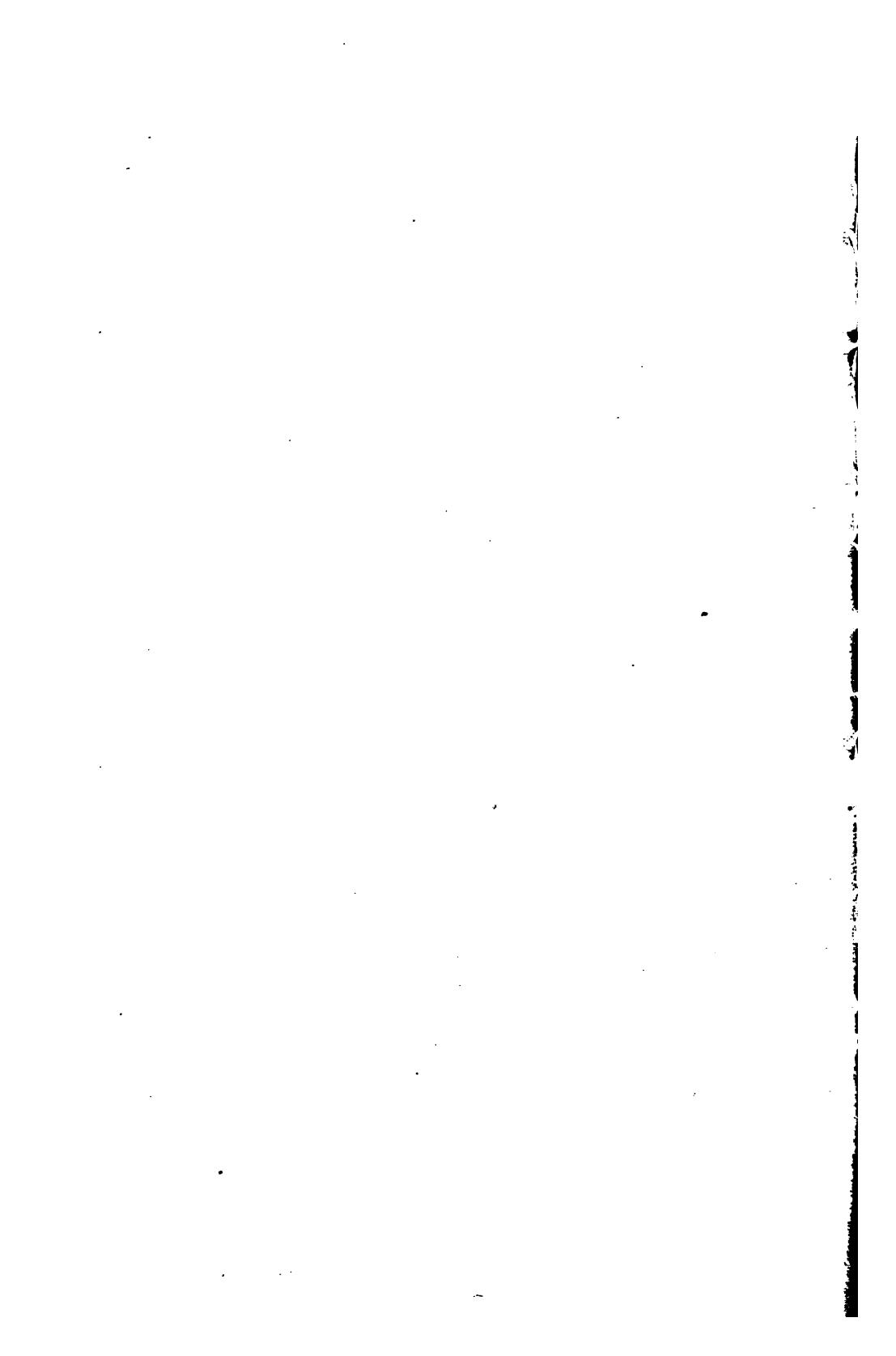
We ask you to appropriate the following sums for the year 1898:

For Morton Park.....	\$350 00
Bates Park.....	50 00
Beach Park	50 00
Burton Park	50 00
	----- \$500 00
Training Green	\$160 00

Respectfully submitted,

NATHANIEL MORTON, GEORGE R. BRIGGS, FRANK H. LANMAN,	Park Commissioners.
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PLYMOUTH, Dec. 31, 1897.



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REPORT

OF THE

Park Commissioners

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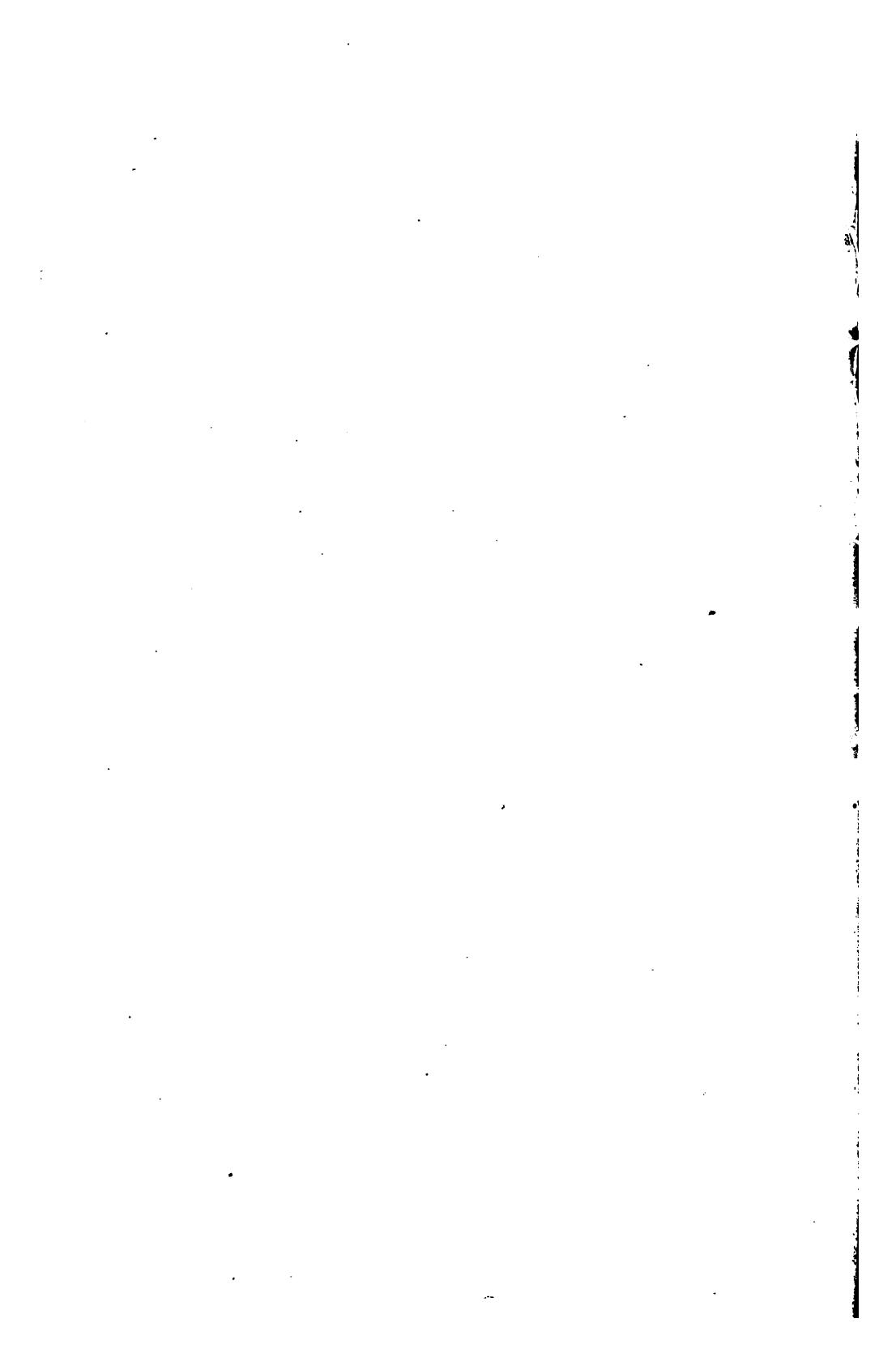
Town of Plymouth

FOR THE YEAR ENDING DEC. 31

1898



PLYMOUTH
THE MEMORIAL PRESS
1899



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REPORT

OF THE

Park Commissioners

OF THE

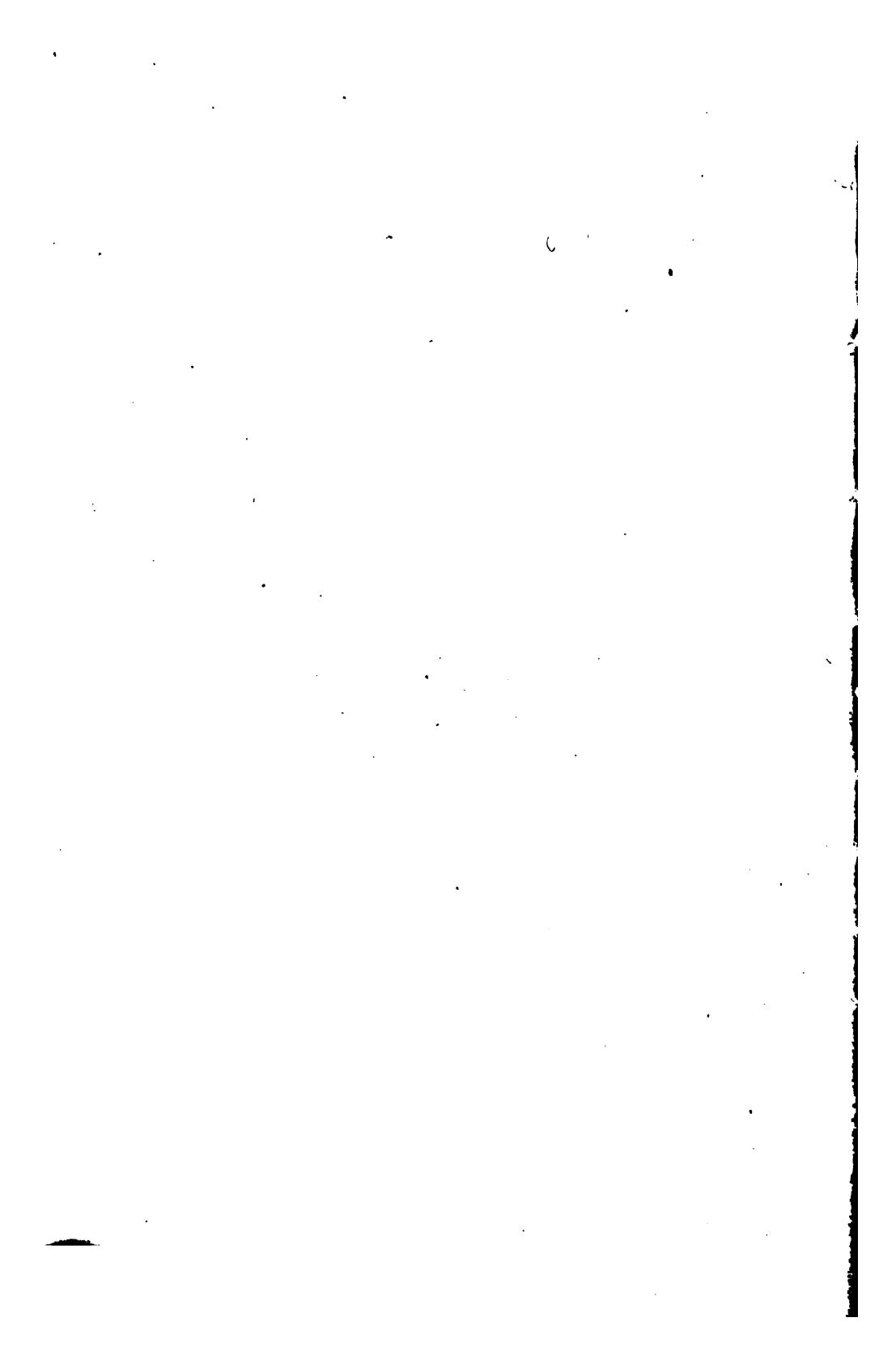
Town of Plymouth

FOR THE YEAR ENDING DEC. 31

1898



PLYMOUTH
THE MEMORIAL PRESS
1899



REPORT OF THE PARK COMMISSIONERS

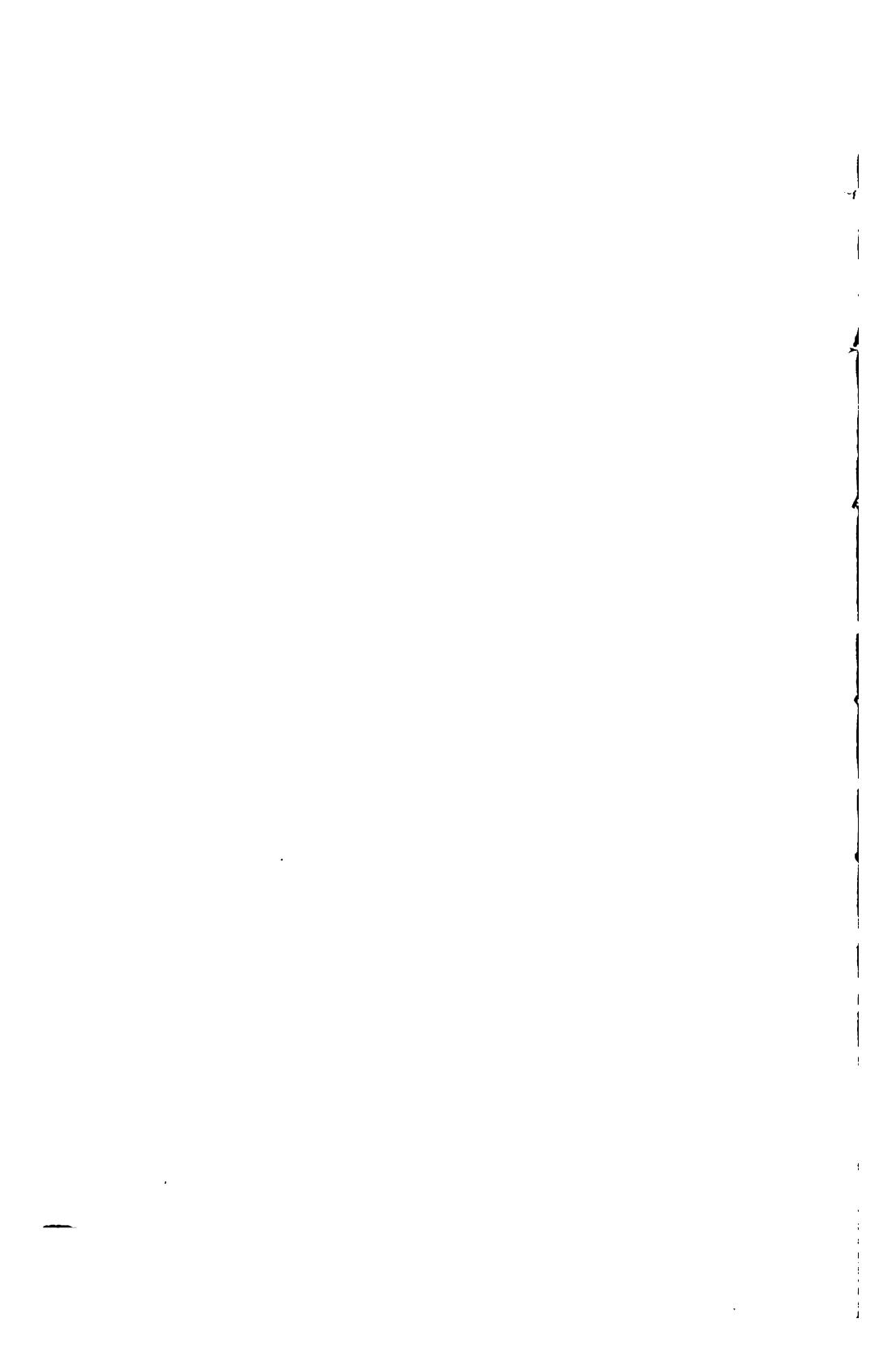
OF THE
TOWN OF PLYMOUTH—
MASSACHUSETTS

FOR THE YEAR

1898

PLYMOUTH
THE MEMORIAL PRESS
1899

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TENTH ANNUAL.

REPORT OF THE PARK COMMISSIONERS.

To the Inhabitants of the Town of Plymouth—

It has seemed desirable to expend more money upon some parks than was anticipated by the Commissioners, but the total expense this year for parks is less than the amount authorized by the town.

PARK ACCOUNT.

The undrawn balance from 1897 was	\$170.48
Appropriation, 1898,	500.00
Bath-house permits,	3.00
Cash for wood sold,	1.88
	675.36

EXPENSES FOR MORTON PARK.

Roads,	\$231.15
Walks,	57.16
Trimming trees and clearing up grounds,	57.86
Cutting wood,	31.41
Setting out trees,	19.58
Repairs to buildings and seats,	21.13
Printing,	7.50
Gravel Screen,	7.25
Pump,	2.57
Signs,	1.40
	\$437.01

—4—

FOR BURTON PARK.

Preparing ground and setting out and hoeing shrubs,	\$47.55
Shrubs,	57.15
Stock for fence,	9.33
Fence and trees,	6.30
Manure,	36.00

	\$156.33

FOR BATES PARK.

Walks and shrubbery,	\$9.33
2,200 brick,	22.00
Building brick gutters,	17.90
Board walks,	6.25

	\$55.48

FOR BEACH PARK.

Painting settees,	\$4.50
Repairing water pipe,	.75
Care of park,	15.00

Balance undrawn,	\$20.25
	6.29

	\$675.36

There are ten or more cords of wood at Morton Park yet unsold.

TRAINING GREEN ACCOUNT.

Appropriation,	\$160.00
EXPENSES.	
Ashes,	\$ 1.00
Rolling lawn,	11.60
Gravel walks,	20.18
Board walks,	9.43

Painting settees,	2.47
Bolting and trimming trees,	2.50
Labor and care of B. E. Blackmer,	125.00
Overdrawn,	\$12.18
	<hr/>
	\$172.18 \$172.18

—
MORTON PARK.

The money expended for Morton Park has been little more than enough to maintain the roads and paths without improvement. Excellent material for roads has been found at the northeast end of the Park, but so little in other parts that it has been impossible with the means at our command to cart to the southeast end of the Park enough material for putting the roads in good condition. The plan pursued of removing inferior trees to give room for the white pines and other seedlings has already made these more beautiful trees a prominent feature in some parts of the park. The predominant wood on the upland is of sprout growth or coppice, mostly oak, being in this case a growth from roots whose tops have been chopped off many times, each growth inferior to the one that preceded it. The natural growth of our oak forests from the seed would produce trees larger, taller and longer-lived than any we now have of sprout-growth. These trees would have few limbs low enough to obstruct a free passage among them, and would restore the unrivalled beauty of the primitive forest. To change all the coppice to seedling-growth would require many years, but by removing some portion of the coppice each year, of the least desirable trees, we should leave room for the seeds of the better trees to sprout, and should thus in time renew the natural forest. Not the oak alone would be renewed, but pine, beech and other desirable trees

would come in to give variety to the scenery; and moreover, seed could be planted where natural seeding should be found deficient. The value of the cut wood should nearly equal the cost of destroying the stump-growth.

The late Charles Eliot, of the recent firm of Olmstead, Olmstead and Eliot, in a paper on "Vegetation and scenery in the Metropolitan Reservations of Boston," writes thus in regard to coppice growth: "The interior of a high coppice-wood is seldom as beautiful as the interior of a seedling-forest, not to speak of an open grove. It lacks the pleasing variety of natural woods, composed as such woods usually are of numerous competing kinds of trees and underwood. The crop-like or artificial nature of sprout-growth is obvious at a glance, and cannot be concealed by an occasional though rare luxuriance of undergrowth or pretty play of light and shade. * * * * On the other hand, the general appearance of the ordinary sprout-growth, when it is seen from a distance in any broad view over the reservations, is as dull and tame as is its usual appearance close at hand."

Eight hundred small white pines and a few black walnuts have been set out this year at no expense except for the labor of transplanting. The many white pines and sweet chestnuts set out in previous years are growing finely.

The gale of Nov. 26th and 27th blew down several of the largest pitch-pines of the old grove and many trees in other places. The principal loss is in the grove.

BEACH PARK.

The damage to Beach Park by the gale is very great. The sea broke over the whole of it, washing away the crown of the beach and floating off and destroying the pavilion, band-stand and waiting room. Nothing has been saved from the wreck except the settees, many of which are damaged. These were found more than a quarter of a mile

from the beach, on or near the floor of the waiting-room in which they had been stored for the winter.

The new course Eel River has found to the sea divides the park into two parts, the northerly, which is the greater part, having no town-way to reach it.

While in doubt what may be done by the general government, the state or the town in repairing the beach, it seems desirable to adopt if possible some inexpensive plan whereby the drifting sands may be accumulated and the park may be raised to a level higher than has ever been reached by the sea.

There appears to be as much sand on the beach as formerly, but it needs to be collected at the middle of the beach to form an effective barrier to the encroachment of the sea. The prevailing dry winds blow toward the sea and tend to carry the body of the beach that way. The sea throws weed and drift stuff upon the beach, and sand also from the ever falling cliffs toward Manomet. These two forces acting on opposite sides of the beach, tending to build it up, may need little yet constant assistance to hold the sand and sea-drift by which the top of the beach can be built up rapidly and be kept secure against damage when it once gets high enough not to be overrun by the sea.

BURTON PARK.

The importance of a plan for the improvement of Burton Park led to securing the services of Mr. B. M. Watson. His plan, generously presented to the town, was unhesitatingly approved by this Board, and has been carried out in detail so far as practicable this year.

The exposure to which all planting is liable adjoining a highway and opposite the grounds of public schools obliged the erection of a temporary fence to protect the plants while young. As the fence does not surround the cultivated ground it is not a complete barrier, but is more

properly a prominent notice that all persons are requested not to cross the planted ground nor molest the shrubs. It is a pleasure to be able to say that this request has been all that was necessary for the required protection, a fact that in itself is a credit to the schools and the neighbors.

With a few years of good care this park, which commands a fine view of the sea, will become an attractive hill-side.

BATES PARK.

The principal improvement to Bates Park this year was the making of brick gutters in the part of the main walk which is so steep as to make good earth gutters un-practical. Six inches of additional soil is needed over one-third of the surface of this park to produce a good growth of grass throughout the season. When this is added a small annual outlay will maintain Bates Park as a beautiful grass lawn with few shrubs and trees.

TRAINING GREEN.

The late storm caused much damage to three of the trees on Training Green. Dogs have come there as usual though very unwelcome as they persist in digging holes in the lawn and doing other damage.

Under the faithful care of Mr. Blackmer this park has become more and more attractive.

PARK REGULATIONS.

The following rules have been adopted by the Park Commissioners, under the authority vested in them by the statutes:

Rule No. 1.—Any person killing a bird or other animal, robbing a nest, discharging firearms or setting a fire within the limits of the park lands belonging to the Town,

without permission of the Park Commissioners, will be subject to a fine not less than three dollars nor more than twenty dollars for each offence. Beach Park is excepted from this rule.

Rule No. 2.—No person shall be allowed to use any public park or any portion thereof for the erection or maintenance of any building, or for the storage or deposit of property of any kind without the consent in writing of the Park Commissioners.

Rule No. 3.—No person shall be allowed to camp at night on any public park without the consent of the Park Commissioners.

The penalty for violating either of the above rules is a fine of not less than three dollars nor more than twenty dollars for each offence.

We ask for a general appropriation for all the parks of \$500.00, and a special appropriation for Beach Park, to be used in case it is necessary to take means to prevent further destruction to this park and, indirectly, to other property adjoining.

Also an appropriation for Training Green of \$180.00.

Respectfully submitted,

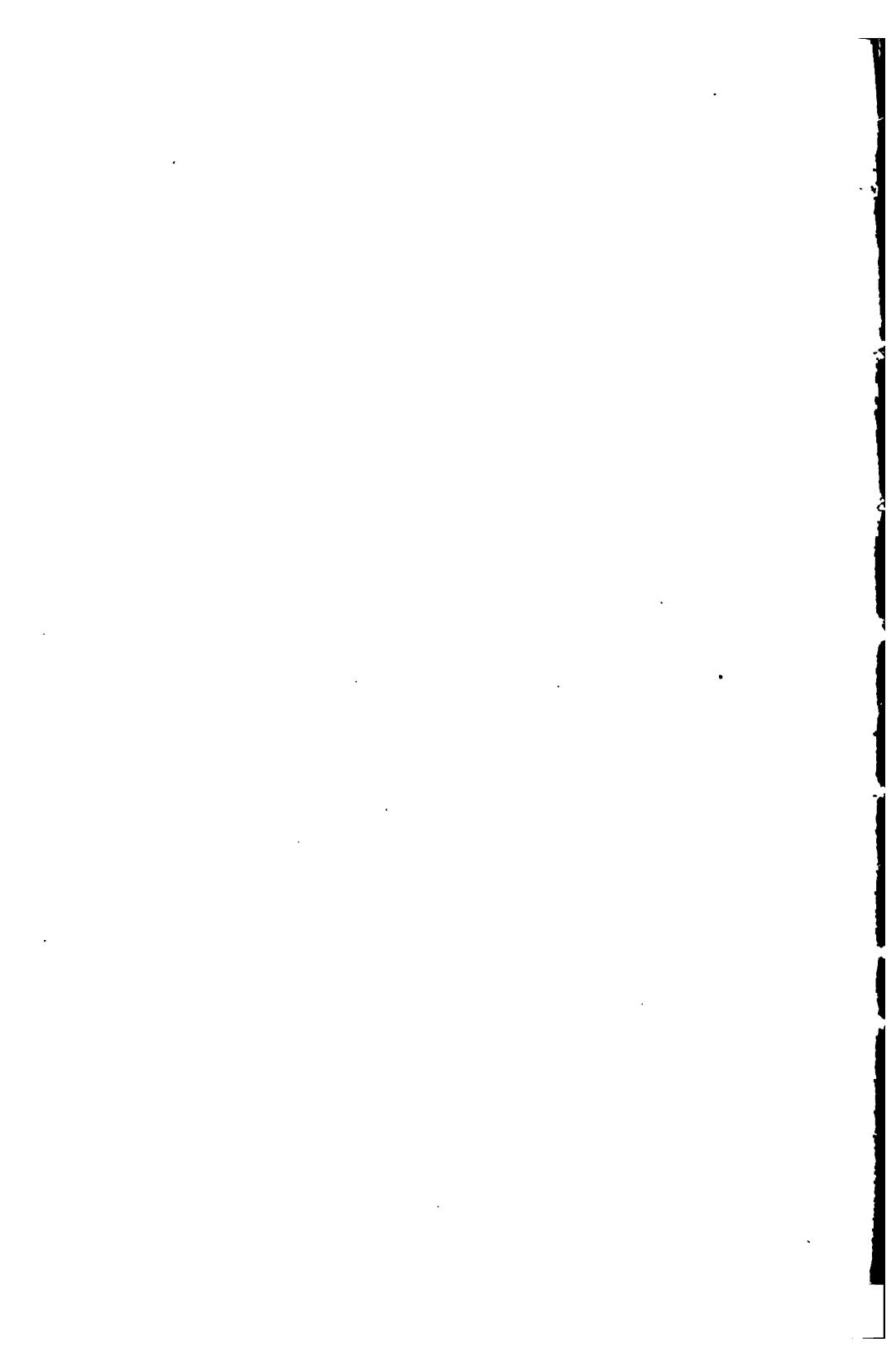
NATHANIEL MORTON,

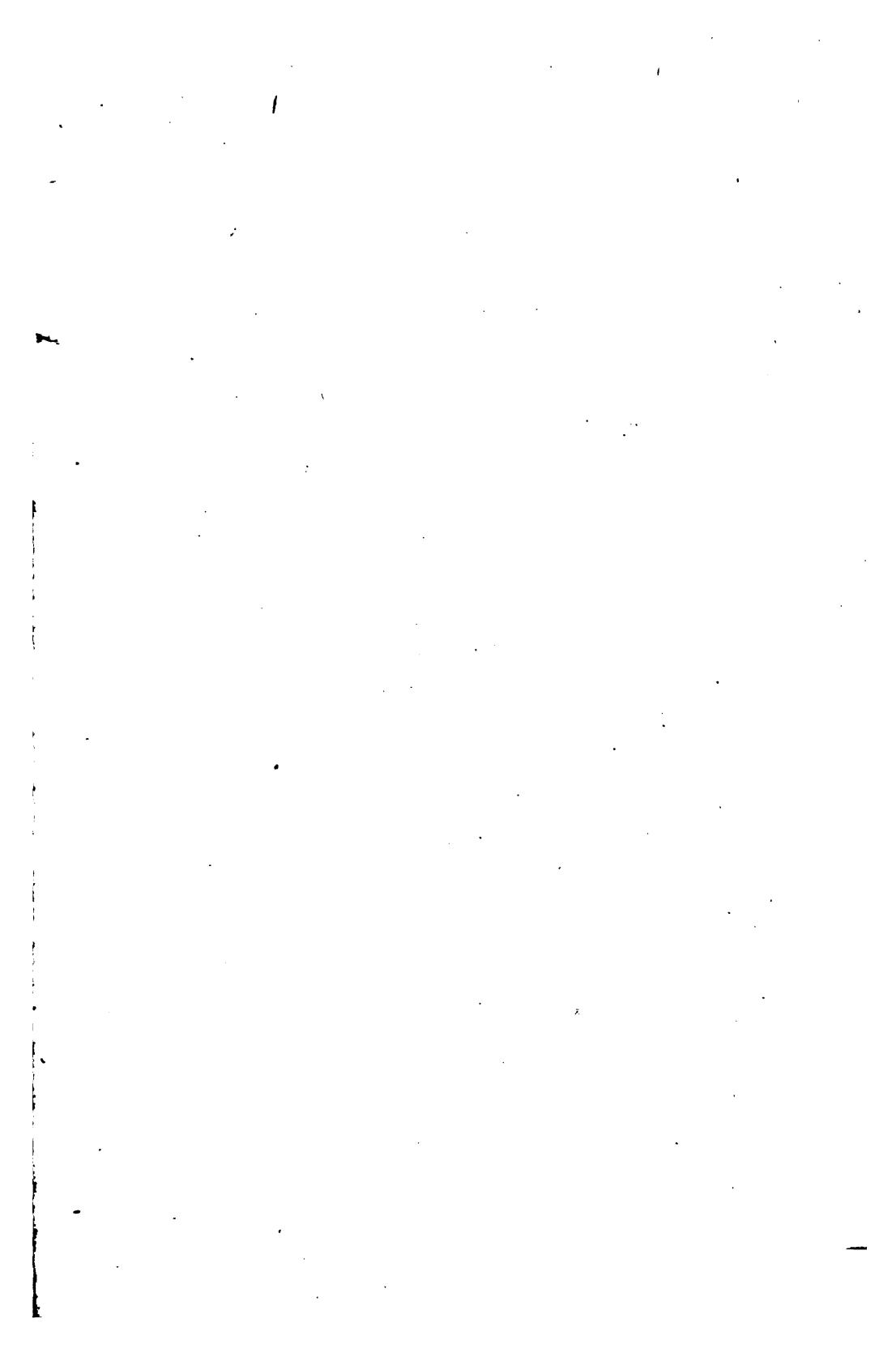
GEORGE R. BRIGGS,

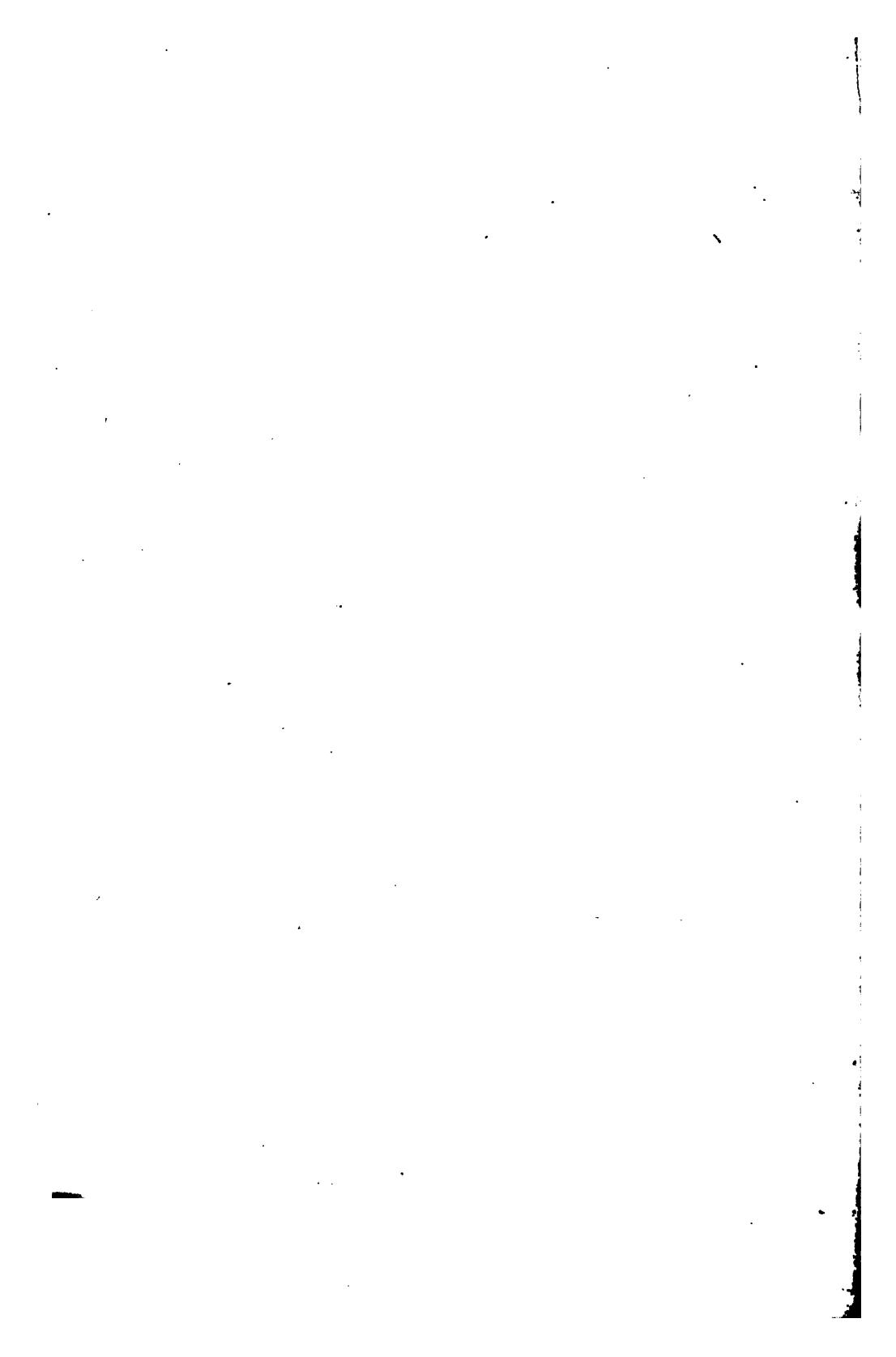
FRANK H. LANMAN,

Park Commissioners.

PLYMOUTH, MASS., Dec. 31, 1898.







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REPORT

OF THE

Park Commissioners

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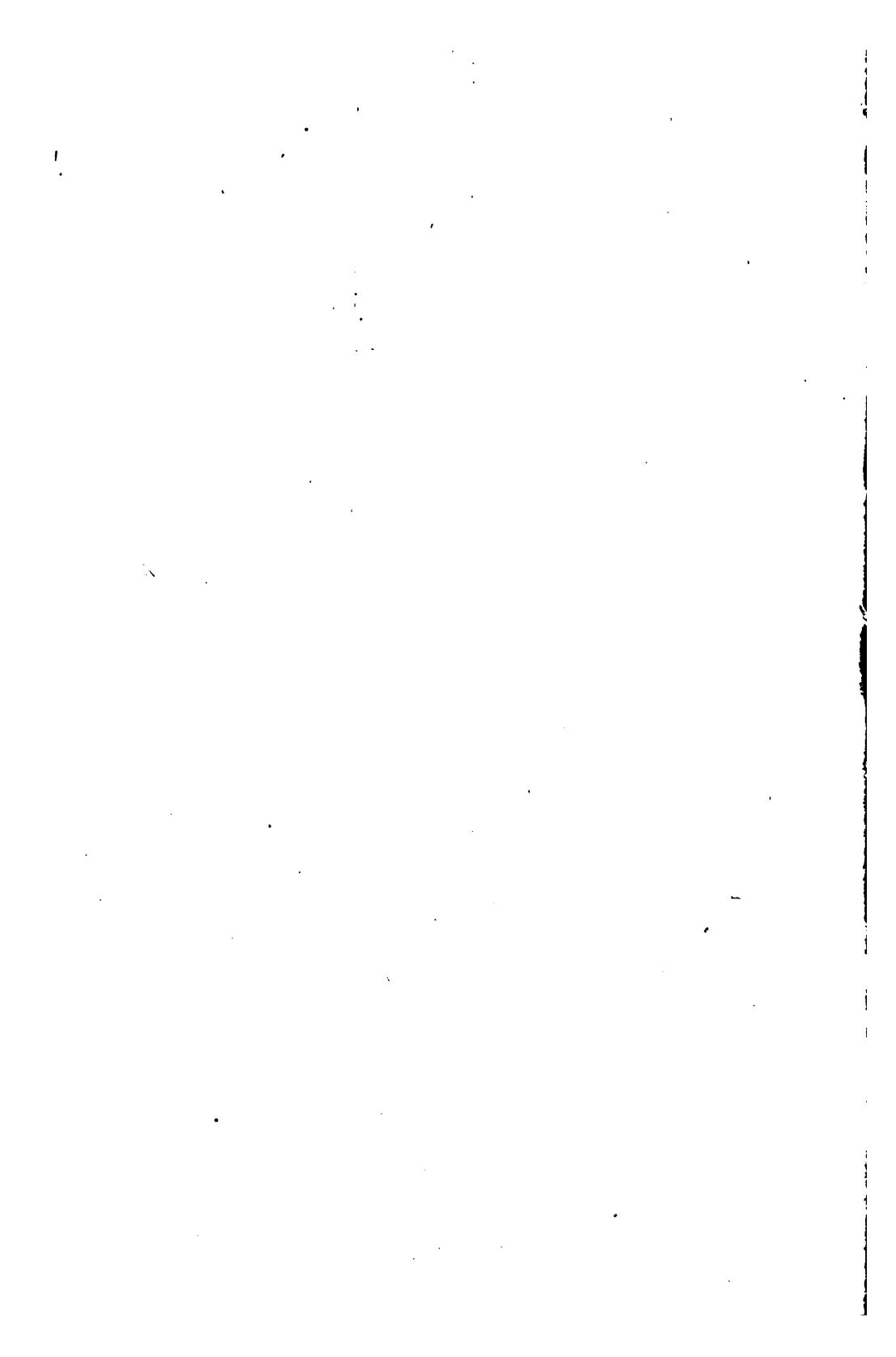
Town of Plymouth

FOR THE YEAR ENDING DEC. 31

1899



PLYMOUTH
THE MEMORIAL PRESS
1900



ANNUAL REPORT

OF THE

PARK COMMISSIONERS

OF THE

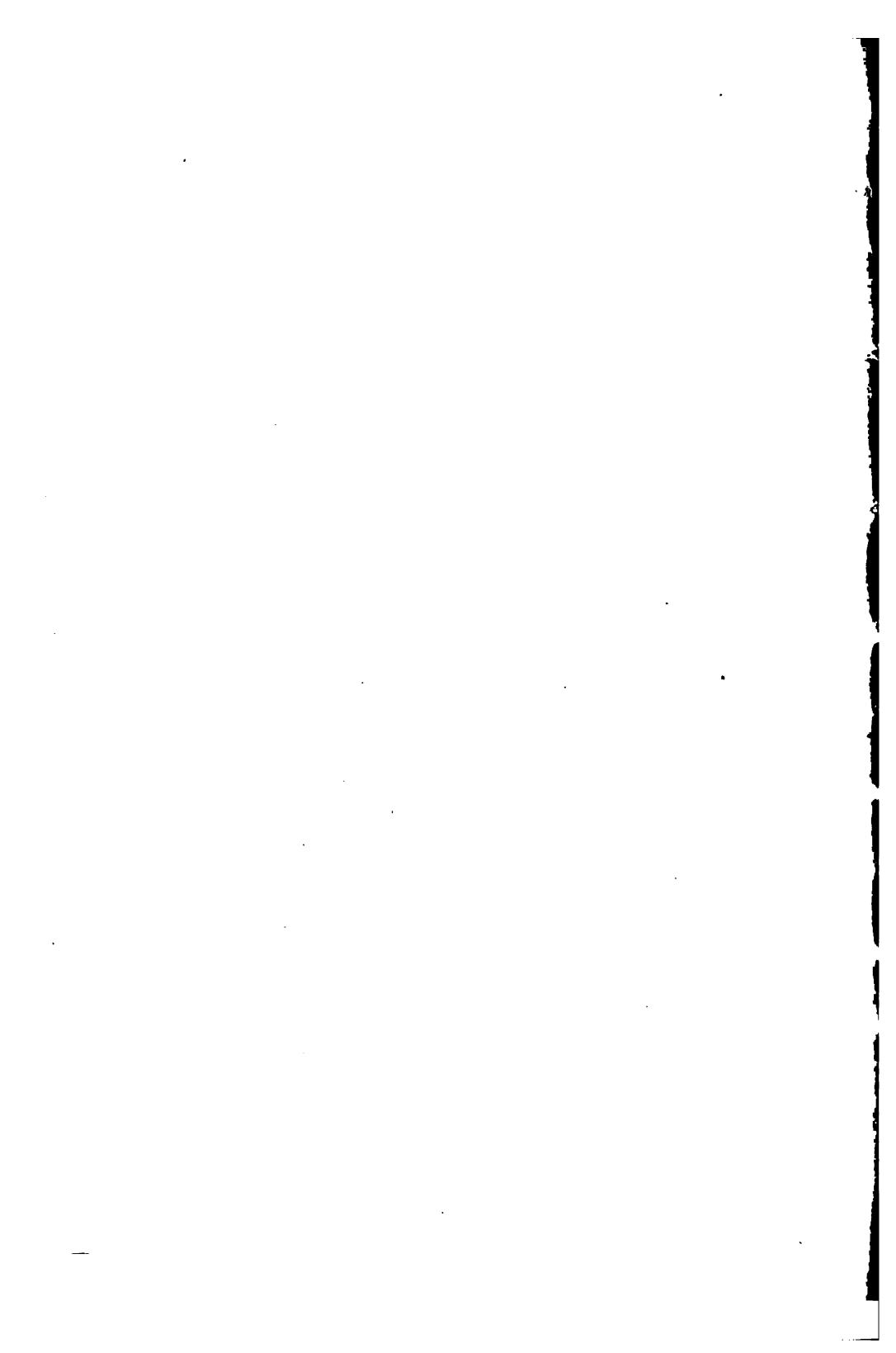
TOWN OF PLYMOUTH
MASSACHUSETTS —

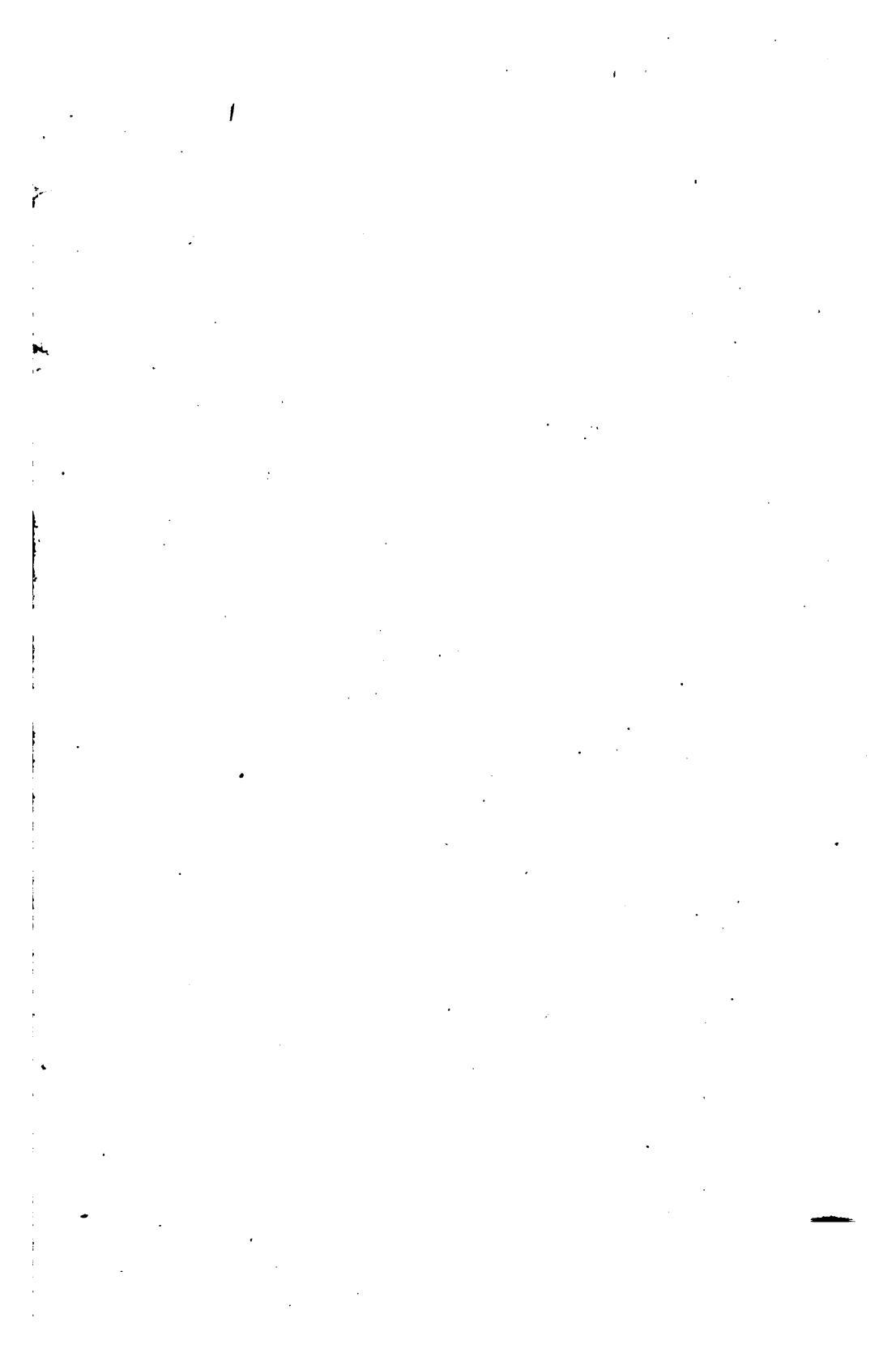
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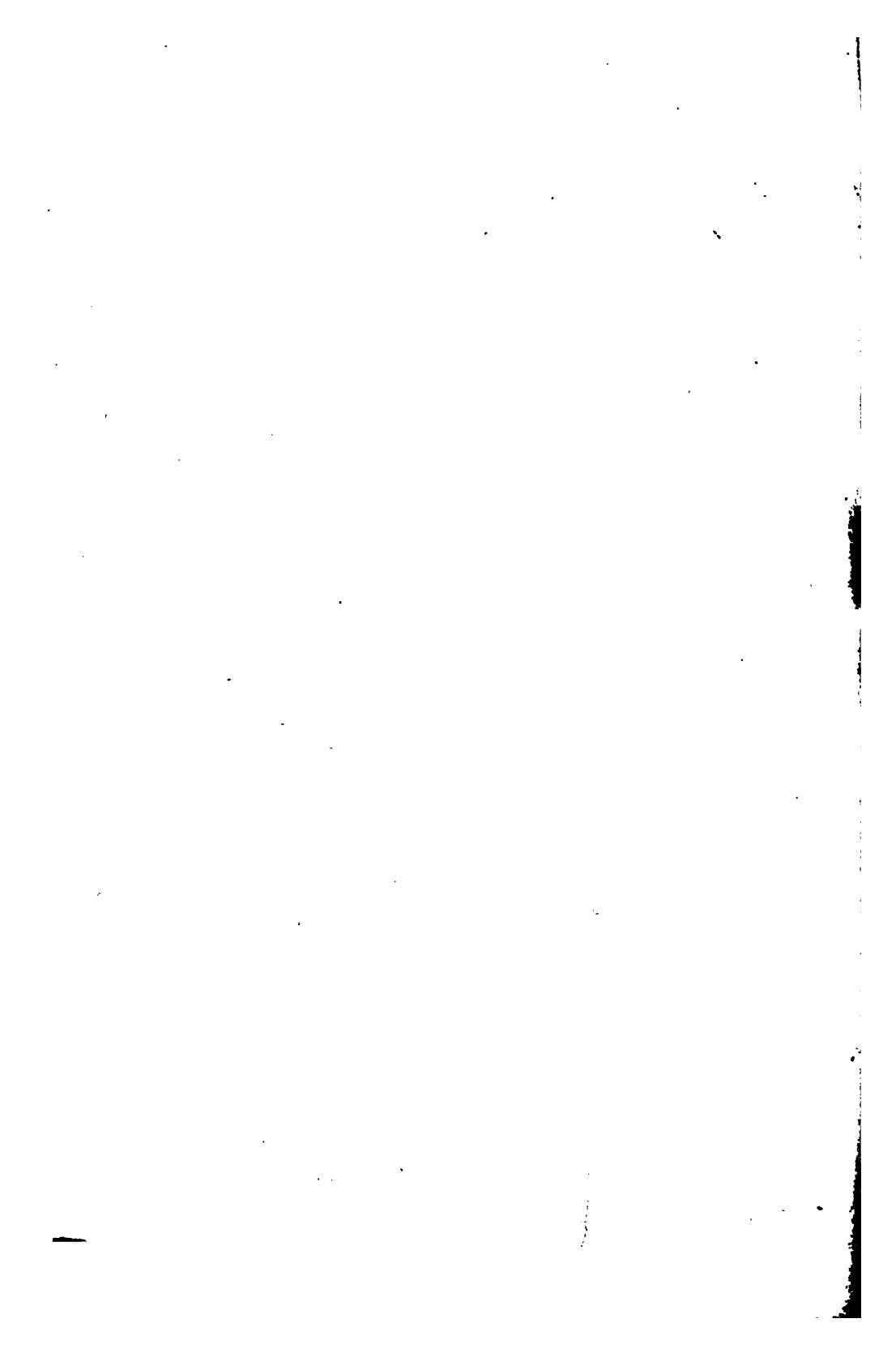
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1900

Complaints of







115
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REPORT

OF THE

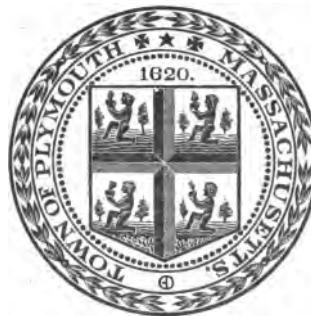
Park Commissioners

OF THE

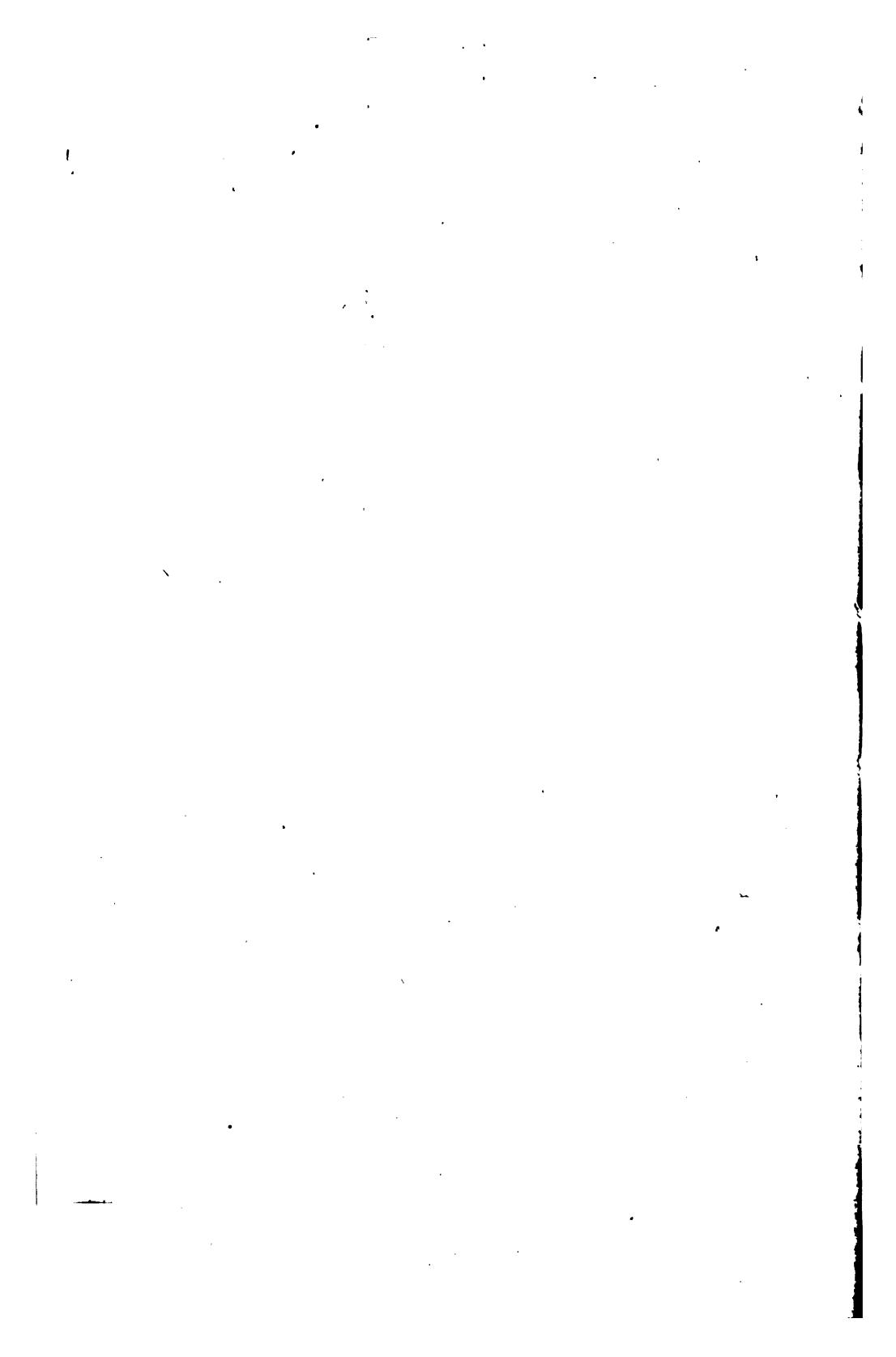
Town of Plymouth

FOR THE YEAR ENDING DEC. 31

1899



PLYMOUTH
THE MEMORIAL PRESS
1900



ANNUAL REPORT

OF THE

PARK COMMISSIONERS

OF THE

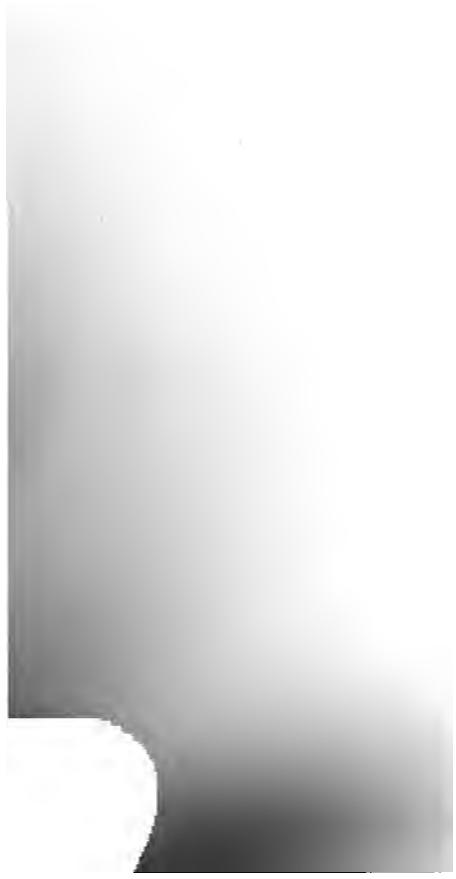
TOWN OF PLYMOUTH
MASSACHUSETTS —

FOR THE YEAR

1899

PLYMOUTH
THE MEMORIAL PRESS
1900

Commitments of



ELEVENTH ANNUAL
REPORT OF THE PARK COMMISSIONERS.

To the inhabitants of the Town of Plymouth:

PARK ACCOUNT.

The undrawn balance from 1898 was	\$ 6 29
Appropriation,	500 00
39½ cords wood sold on the lot to the	
Overseers of the Poor, \$2.50,	98 75
	<hr/>
	\$605 04

Expenses of Morton Park.

Building a path across the cedar swamp to the source of Town brook and by the shore of Billington Sea to the upland, length, 750 feet; width, five feet,	\$175 77
Repairing roads,	62 85
Cutting wood,	99 85
Labor on woods path,	2 75
Trimming trees and burning brush,	158 91
Printing park reports,	7 50
Tools,	4 45
Repairing pump,	1 00
	<hr/>
	\$513 08

For Burton Park.

Planting trees, hoeing and trimming,	\$8 40
Wire for fence,	49
	—————
	\$8 89

For Bates Park.

Replacing board walk,	\$1 92
Other labor for the care of this park was donated.	

For Beach Park.

Building timber and brush breakwater,	\$62 40
	—————
	\$586 29
Balance undrawn,	18 75
	—————
	\$605 04

TRAINING GREEN ACCOUNT.

Appropriation,	\$180 00
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Expenses.

Trimming trees broken by the gale of 1898,	\$13 95
Ashes,	1 50
Gravel walks,	19 68
Replacing board walks,	8 27
Painting settees,	5 00
Labor and care of B. E. Blackmer,	125 00
Undrawn,	6 60
	—————
	\$180 00

MORTON PARK.

The unusual height of water in Billington Sea in the summer of 1898 overflowed the path across the cedar swamp and moved out of place some of the logs and plank with

which the path was covered. This path skirts the brook a part of the way to its source at Billington Sea; thence crosses the swamp and upland in sight of Billington for several hundred feet to "The Landing;" it is the most direct foot path to that point, and important for the variety of the beautiful views it affords of brook, lake, swamp and upland.

The winter of 1898 freezing the swamp, the opportunity was used to cart gravel over it by which means the path was raised above high water mark for a distance of 750 feet, thus forming a permanent level path five feet wide.

The wood sold this year was cut from pitch-pine trees blown down in the gale of November 1898, and from coppice (sprout) growth of oak on the plan outlined in our report of 1898.

On the land between Billington Sea and the road leading west from Daniel's Neck, where Billington Sea and Little Pond come the nearest together, a specimen thinning of coppice growth was made this year, opening under and between the trees, views of Billington Sea from the road and neighboring path.

The narrow strip of land between these two large bodies of water is a part of the land originally laid out to Daniel Dunham and was called Daniel's Neck in the deed of Mary Dunham to the Town in 1776.

The cost of filling brook path, trimming trees and burning brush left barely enough money to spend upon the roads to keep them from being much washed by the rains.

Your commissioners feel that there is public need of further improvements to the roads and paths, and such treatment of the woods as will result in increased attractions for all who visit the park. They also feel that they may be justly censured for neglect of duty if they do not call the attention of the town to the need of larger annual appropriations for parks. Morton Park alone has about five miles of roads, three miles of paths, one hundred and forty acres of wooded lands, and about ten acres of open lands.

Every man, woman and child who goes to our parks can feel that they have a share in their ownership, and may use them as their own as long as they comply with the simple regulations that are needed to preserve the ownership equally well for one and all.

The paths and roads being well shaded are attractive to bicyclers, and would be a favorite resort for them if a good track were maintained throughout the park.

All persons are most earnestly requested not to take branches from the beech trees, nor to cut any pine, hemlock, or other variety of evergreen tree or shrub, the growth and increase of which is so much desired in many parts of the park.

BEACH PARK.

The gale of November, 1898, left a large quantity of bushes, parts of trees and other drift stuff in the vicinity of the park, offering a favorable time to experiment upon the effect of constructing a barrier to lodge and hold the sands which are moved about by the winds and waves. A large number of railroad ties nearby, which cost only the expense of cartage, were used to enclose a part of the beach, about 350 feet long and 15 feet wide, just above the usual high water mark. The ties were mostly set two to four feet apart, about half their length in the sand. The part of the beach thus enclosed by posts was covered with the drift material above mentioned. There has been no severe north-easterly gale since this barrier was built, so that no high sea has as yet reached it. Sand moved by the wind has lodged somewhat within and around the barrier. About 60 feet nearer the water the sea has built up since the gale of 1898, a broad ridge of sand and drift several feet in height, which the next gale may move further up on the beach, and thus test the efficiency of the barrier.

The contract of parties to build a stone breakwater on the

beach does not include all the beach. Stone breakwaters are no doubt desirable, but it is possible that the need of them can be largely reduced by precautionary measures. Some parts of the beach not covered by the present contract are high enough not to be overrun by the sea, but here and there are low places or gullies in the crest of the beach where the wind has blown away the sand. The placing of barriers of brush, seaweed, and other drift stuff in such gullies, would rapidly collect the drifting sand to be covered again by barriers until the crown of the beach the whole length would be raised enough not to be overrun by the sea.

The damage to the beach by any gale has been caused by the sea breaking over the low places first, and then widening out on both sides, thus sweeping away the higher parts also. As the general government limits its action largely to building up the beach where it has been destroyed, may not the Town wisely use preventive means to save the beach from destruction?

The highway through this park has been raised by the Town a few feet above the former level, giving better protection against the sea to the land on the southerly side of the road, where it would be desirable to build a waiting room in place of the one that was washed away. Any structure to serve the purpose well would cost as much as \$300.00. A simple foot bridge across Eel River, where the river now crosses the beach to the sea, would be a great public convenience. The probable cost would be about \$150.00. Such a bridge might, of course, be liable to be destroyed in such rare storms as that which caused the diversion of the river.

BURTON PARK.

The shrubs planted in 1898 have become an attractive feature. The increasing interest the neighbors take in this park is an indication that it is improving in general appearance.

BATES PARK.

About one-third of the surface of this park yet lacks sufficient depth of soil to maintain a good grass lawn. We have not succeeded in finding soil for this purpose which could be delivered at the park at a price within our means.

The brick gutters laid in 1898 have served to protect the part of the walk where laid. A continuation of this brick gutter nearly the whole length of the park is desirable.

TRAINING GREEN.

The rough spruce board walks with supports of 2x4 inch joists, 2 feet apart, which have been in use about nine years, have had but little repairs, and promise to serve their purpose many years longer without renewal. A dressing of ashes or other fertilizer is needed to help maintain the grass.

Money has been well spent in making Training Green a prominent ornamental feature of our town; yet there are men and boys who set fires there every Fourth of July, which do great damage. Similar and worse things are done on the same day at other places in the town.

The Selectmen have the authority and it is their duty to prevent this wanton destruction of property, which is a great disgrace to the Town and an educator for the young in the wrong direction. It is time for our people to give unhesitating support to any means that may be used to overcome this bad use of a day which could be well filled with pleasure for all and harm to none.

We ask for the following appropriations:

\$600.00 for parks.

\$300.00 for waiting room, Beach Park.

\$150.00 for foot bridge, Beach Park.

\$200.00 for Training Green.

Respectfully submitted,

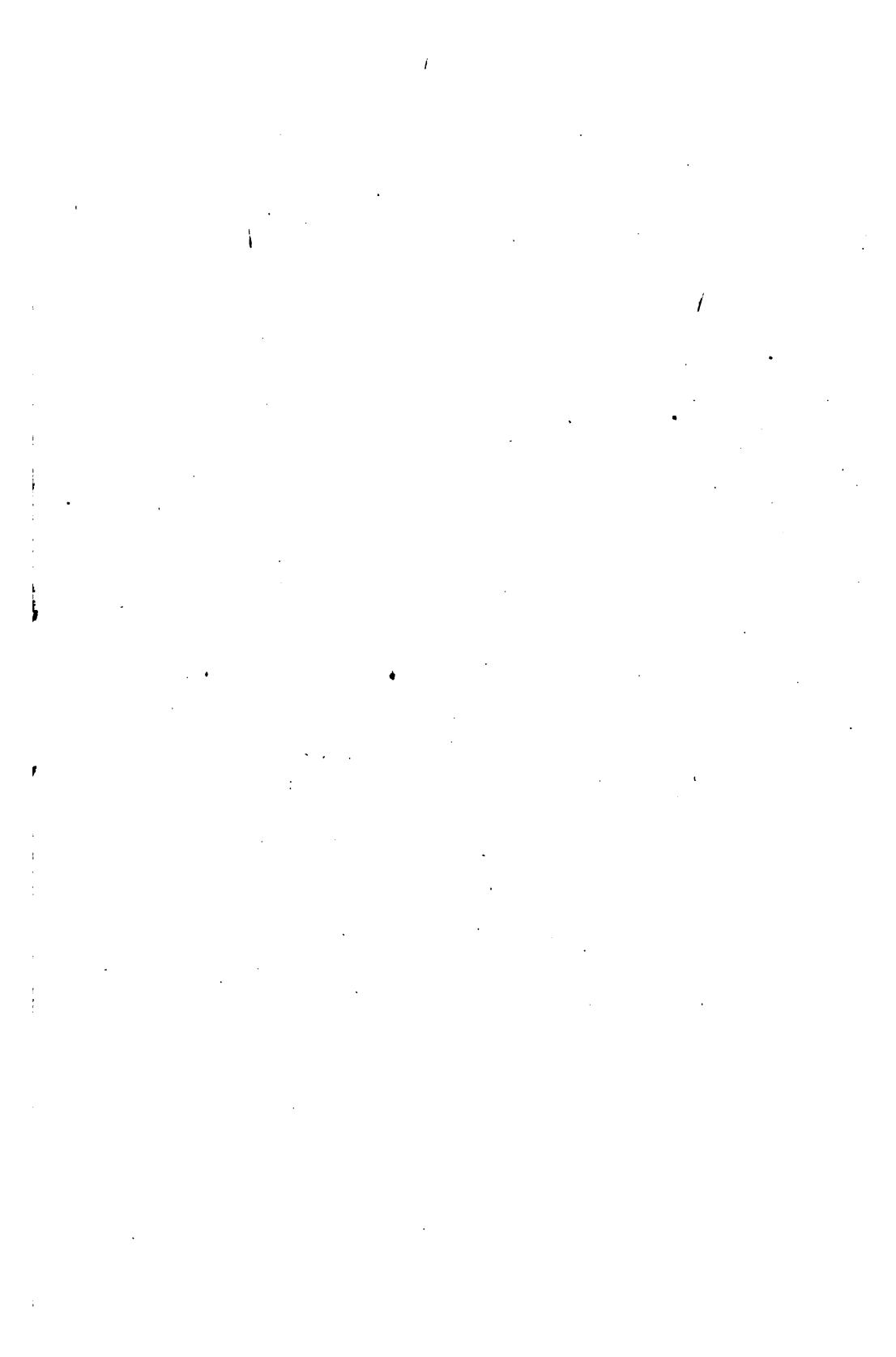
NATHANIEL MORTON,

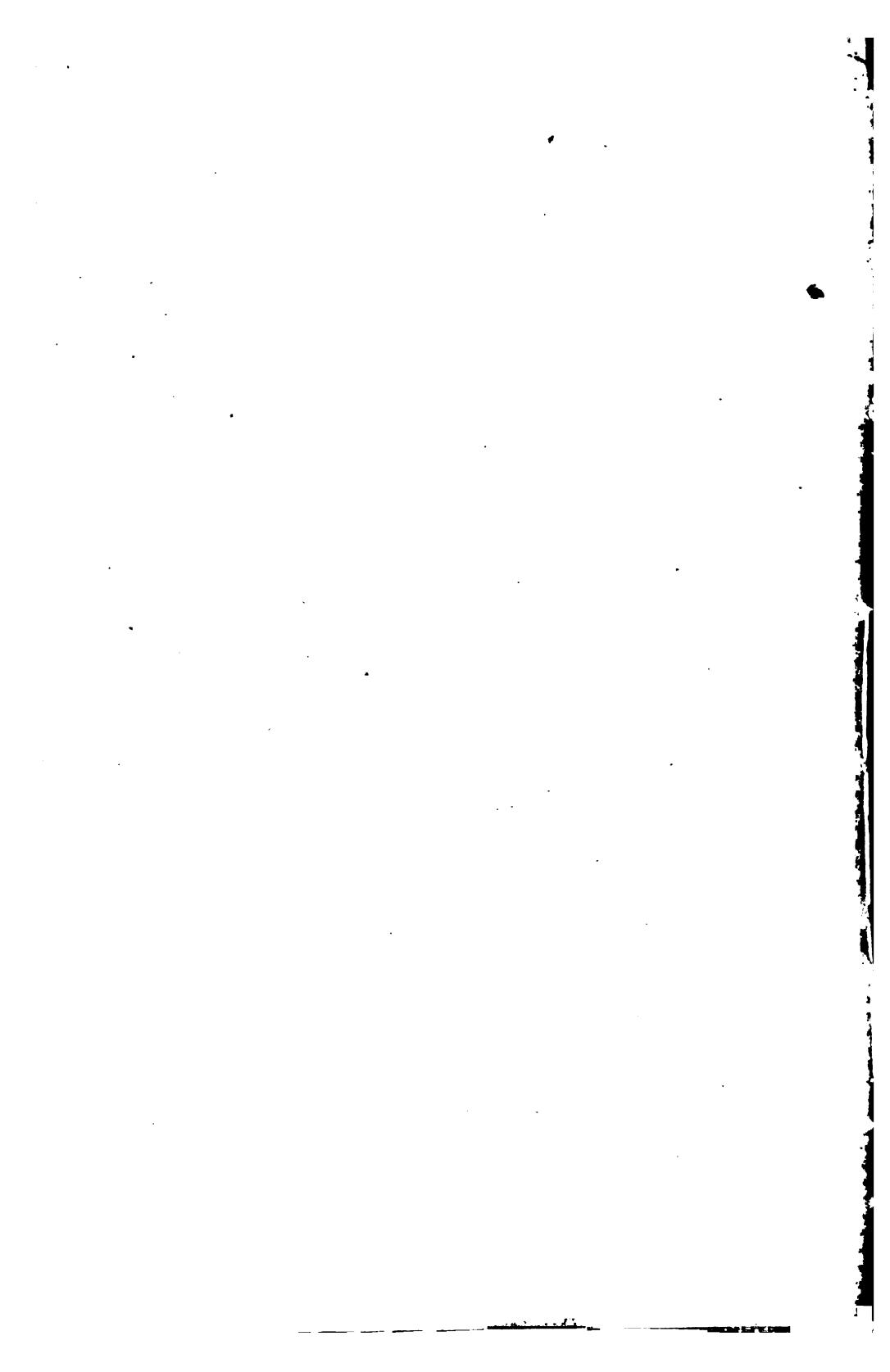
WALTER H. SEARS,

GEORGE R. BRIGGS,

Park Commissioners.

PLYMOUTH, MASS., December 31, 1899.





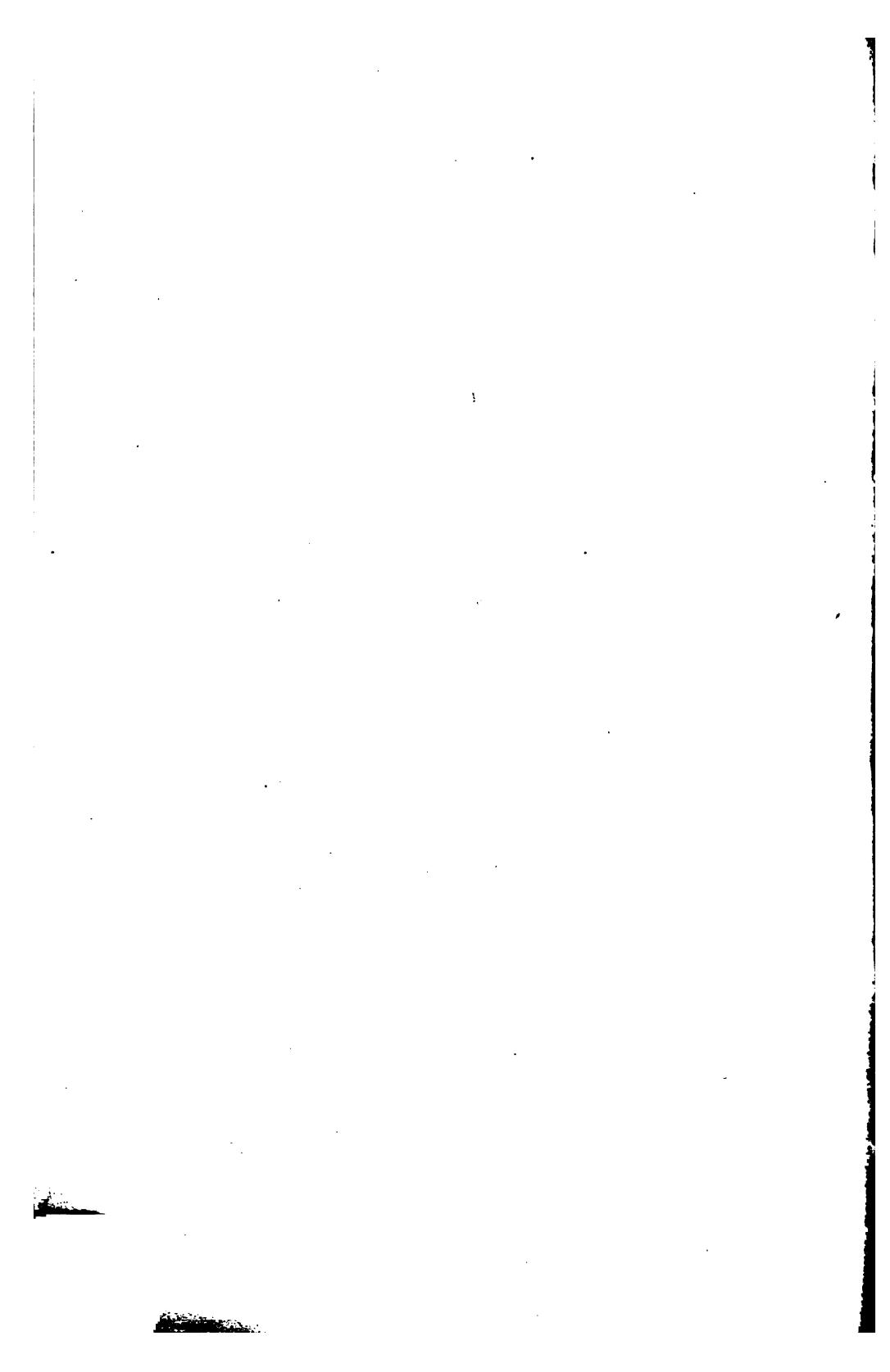
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REPORT
OF THE
PARK COMMISSIONERS

AND OF THE
TREE WARDEN
OF THE
TOWN OF PLYMOUTH,
MASSACHUSETTS.

FOR THE
YEAR ENDING DEC. 31,
1900

PLYMOUTH
THE MEMORIAL PRESS
1901.



REPORT
OF THE
PARK COMMISSIONERS
AND OF THE
TREE WARDEN
OF THE
TOWN OF PLYMOUTH,
MASSACHUSETTS.
FOR THE
YEAR ENDING DEC. 31,
1900

PLYMOUTH
THE MEMORIAL PRESS
1901.

Compliments of
NATHANIEL MORTON,



TWELFTH ANNUAL.

REPORT OF THE PARK COMMISSIONERS.

To the Inhabitants of the Town of Plymouth:

PARK ACCOUNT.

The undrawn balance from 1899 was	\$18 75
Appropriation,	750 00
44 cords of wood sold at Morton Park,	110 00
Bath house permits at Beach Park,	6 00
	<hr/>
	\$884 75

Expenses for Morton Park.

Cutting and carting wood, trimming trees and burning brush,	\$296 15
Labor on roads and paths,	170 51
Axes, \$9.46; printing, \$7.50,	16 96
	<hr/>
	\$483 62

Burton Park.

Clearing grounds, transplanting and trimming shrubs,	6 00
---	------

Bates Park.

Labor on walks, trees and shrubs,	\$17 30
Dressing, \$3; painting settees, \$1,	4 00
221 tons soil, \$110.50; grading, 7.60,	118 10
	<hr/>
	\$139 40

Beach Park.

Labor clearing up grounds,	\$11 50
Repairing and painting settees,	6 00
Care of park by Harry L. Sampson,	15 00
Lock and dipper,	40
Deficiency in appropriation for waiting room,	20 71
	—
Undrawn balance,	\$53 61
	202 12
	—
	\$884 75

BEACH PARK ACCOUNT.

Special appropriation for waiting room,	\$300 00
Received from park appropriation,	20 71
Total receipts,	—

Expenses.

Carpenter work,	\$191 76
Plumbing,	110 00
Painting, \$15.20; labor, \$3.75,	18 95
	—

\$320 71

TRAINING GREEN ACCOUNT.

Undrawn balance from 1899,	\$6 60
Appropriation,	200 00
	—

\$206 60

Expenses.

Labor on gravel walks,	\$39 56
Labor on board walks,	10 09
Lawn mower, \$7.50; ashes, \$10.13,	17 63
Care of grounds by B. E. Blackmer,	125 00
Undrawn balance,	14 32
	—

\$206 60

The balance of the appropriation for parks will be used to pay for cutting wood in January and February.

MORTON PARK.

It is well known that coppice, or sprout growth, such as constitutes the bulk of our woods, is short lived. Many such trees in the park have reached the limit of their growth and are beginning to decay. It is the aim of your commissioners to develop the good seedling trees, and to add to their number and variety as fast as practicable. We wish to preserve the forest character of the park, but to make it more truly a forest,—composed of fine individual trees which will grow for generations, always increasing in grandeur. To do this necessitates the cutting of many inferior trees which are losing their vitality and beauty, or choking the growth of promising seedlings, or occupying desirable places for planting trees which will be needed to maintain the forest when the coppice dies.

While trimming near the westerly side of Little Pond, in order to give room for the growth of some promising white pines, a fine view of this pond was opened unexpectedly; this view can be much enlarged without interfering with our general plan for improving the park.

A few years ago Mr. George P. Hayward gave some young black spruce and balsam fir trees to the park. These were set out in prominent places and are much valued,—especially because neither spruce nor fir is native to our woods. We regret to say that some of these fine young trees were stolen this winter—presumably for Christmas trees; they may have been taken by thoughtless persons who only considered the pleasure the trees would give when used for Christmas, but the commissioners must insist that no trees or shrubs in the park shall be removed or mutilated.

The bridge over the dam will soon need to be rebuilt or thoroughly repaired. It may be better to abandon this crossing, bridge the brook about one hundred and fifty feet higher up the stream, and so improve the grade of the road on the southerly side of the brook.

PROPOSED ADDITION.

Only nine acres of this park lie on the southerly side of the brook. The chairman of the board has now succeeded in buying about nineteen acres more land on the same side of the brook, adjoining the park lands nearly all the way from Deepwater Bridge to Billington Sea, and including about three hundred and fifty feet more of the shore of Billington Sea. A road has been built which gives easy access to the land, and paths wind through it in various directions.

About twelve and a half acres of the most desirable parts of this land, including the road, will be offered as a gift to the town next March for an addition to Morton Park. We consider that this tract of land would be a very valuable addition to the park and could be maintained at small expense.

BEACH PARK.

The new waiting room at this park has served its purpose very satisfactorily. It was placed several feet above the foundation of the building which was washed away by the great storm of 1898.

The barrier placed on the beach in 1899 to aid in collecting the drifting sand and seaweed has raised the height of the beach in and around the barrier, which indicates that by such means the beach could be raised enough to prevent the highest tides from flowing over it.

The new outlet of Eel River to the sea has been closed twice by sand until the river got high enough to break through the beach again, each time breaking through a little

further south than the previous opening. If the outlet continues to move southerly it may not be long before the river will find a direct outlet from the easterly end of the bridge to the sea.

BURTON PARK.

With the growth of the shrubbery at this park, some can be spared and used to advantage at Bates Park.

BATES PARK.

A favorable opportunity was used this year to increase the depth of soil on about one-third of the surface of this little park. The whole surface now has sufficient soil to maintain a good grass lawn, which, with the trees and shrubs, will make an attractive feature in that neighborhood.

TRAINING GREEN.

Notwithstanding the long-continued dry weather of last summer and fall, the grass on this public square remained green. This was probably due to the dressing of wood ashes which it received in early spring, and to the close cutting of the grass through the season. The care given to the grounds keeps them always neat and pleasing to the eye.

We ask for an appropriation of seven hundred and fifty dollars for parks, and of one hundred and eighty dollars for Training Green.

NATHANIEL MORTON,
GEORGE R. BRIGGS,
WALTER H. SEARS,

Park Commissioners.

PLYMOUTH, Mass., December 31, 1900.

REPORT OF THE TREE WARDEN.

To the Inhabitants of the Town of Plymouth:

Section 1, Chapter 330, Acts of 1899, is as follows:

"Every town *shall* at its annual meeting for the election of town officers elect a tree warden, who shall serve for one year and until his successor is elected and qualified. He may appoint such number of deputy tree wardens as he deems expedient, and may at any time remove them from office. He and his deputies shall receive such compensation for their services as the town may determine, and, in default of such determination, as the selectmen may prescribe. He shall have the care and control of all public shade trees in the town, except those in public parks or open places under the jurisdiction of park commissioners, and of these also he shall take the care and control if so requested in writing by the park commissioners. He shall expend all funds appropriated for the setting out and maintenance of such trees. He may prescribe such regulations for the care and preservation of such trees, enforced by suitable fines and forfeitures, not exceeding twenty dollars in any one case, as he may deem just and expedient; and such regulations, when approved by the selectmen and posted in two or more public places in the town, shall have the force and effect of town by-laws. It shall be his duty to enforce all provisions of law for the preservation of such trees."

No appropriation was made by the town under this law.

ACCOUNT.

The Selectmen allowed the tree warden a salary of	\$300 00
Received from P. & K. Street Railway Co. for	
permission to remove two trees,	35 00
Received from Plymouth Gas Light Co. for	
killing two trees by gas,	32 37

Received from sundry other parties,	13 40
Total receipts,	<u>\$380 77</u>

EXPENDED.

Labor of trimming and setting out trees,	\$238 29
Saws, ropes, climbers and other tools,	16 61
Printing,	3 00
Traveling expenses of W. F. Gale of Spring-field, specialist on effect of gas on trees,	6 00
Trees, wire, bolting and counting trees,	11 35
Part of cost of trimming trees on the route of the electric wires,	80 00
Salary remaining for other work to be done,	<u>25 52</u>
	<u>\$380 77</u>

About \$150 of the above was spent in June and July for trimming trees to make head-room over sidewalks and room for vehicles in the streets.

Trees on the westerly side of the street from Kingston line to Cliff street had been much burned by the electric light and electric railroad wires. The plan proposed by the tree warden was to have the wires removed from the trees wherever there was liability of further damage; to have the electric light wires supported on arms over the sidewalk and the railroad wires on arms over the street; and to trim the trees whatever might be necessary to give room for the wires; but when the dead and badly burned limbs were removed, it was found, in most cases, that the wires had made so much room for a route through the middle of the trees as to make it less objectionable to allow the wires to remain in the trees than to trim both sides of the trees for new routes. The cost of such trimming was \$179.23, paid equally by the two electric companies. The cost of other needed trimming of the trees on the route of the electric wires was \$80, included in the above account.

Our public shade trees have never had the pruning that growing trees require to develop the best forms and ensure the longest life. To trim what is now needed to promote the best growth of the trees, remove surplus limbs and limbs hanging too low over buildings and streets, and thereby lessen the dangers of public travel, would require an estimated outlay of at least \$600. One-half of this sum can be expended to the best advantage in March and April.

If the power given by law to the tree warden is rigidly enforced, the larger trees through which the electric wires pass may live and thrive for many years yet—but it would seem to be useless to plant more trees under the electric wires with any expectation of making large and beautiful trees, subject as the growing branches would be to chafings and burnings impossible to prevent. Not only on streets where electric wires are, or soon may be, but on many other streets, it would be most desirable to plant trees on the abutting lands several feet from the outside line of the street, the law authorizing towns to appropriate money for shade trees to be set out, by consent of the owner of the land, not over twenty feet from the street line.

The electric companies have been advised of their liability to the town for all damages done to trees by their wires. As tree warden I should make no claim for damages done this year before the month of October, the time when the route of the wires had been cleared by trimming. The experience we have had with the New England Telephone & Telegraph Co. on the route from Plymouth to Carver is a warning of the danger of permitting telephone and electric companies to trim or cut trees on the highway, and shows the necessity of doing such work ourselves at their expense.

THE IMPORTED ELM LEAF BEETLE.

The following quotations are abstracts from a circular of Prof. Robert A. Cooley, of the Hatch Experiment Station, Amherst, 1896:

"The elm leaf beetle is a native of Europe, but made its first appearance in this country about sixty years ago, and, though it has long been present in the sea-board states south of us, it was not known to occur in Massachusetts till the summer of 1895."

"The insects pass the winter as perfect or adult beetles, in cracks of fences, piles of boards, etc., as well as in houses, barns, and other accessible places. They begin to appear the following spring, a little before the buds of the elm open, and continue to come out for two or three weeks. The females lay their eggs in clusters of from five to twenty, on the under side of the young leaves, and then die. The eggs are orange yellow in color. . . . In about a week these eggs hatch, and it is in the larval stage that the greater part of the feeding is done."

"A full grown larva is about half an inch in length, and has a wide dorsal stripe of yellow, with a lateral stripe of the same color on each side. The greater part of the head and legs and the posterior portion of the last segment of the body are black."

"As soon as the young are hatched, they begin to feed, which they continue to do for about two weeks, but as the eggs do not all hatch at once, the larvæ may be found on the trees for a much longer period of time. When the larvæ have finished feeding, they crawl down the trunk of the tree in search of a place to pupate. The ground at the base of the tree appears to be the normal place for pupation, though many transform in crevices of the bark before reaching the ground, while others drop from the limbs, especially when they bend down near the ground."

"The pupa is uniform light yellow, oval in shape, more rounded on the back than on the ventral side, and is considerably shorter and broader than the full grown larva."

"In from six to ten days the perfect beetles emerge, and, after feeding on the leaves for a short time, seek their winter

quarters, where they remain till the following spring. The perfect beetle averages about a quarter of an inch in length and is yellowish brown in color, with three more or less apparent longitudinal, blackish stripes on the back. Farther south there are two distinct broods of the insect each year, but in our latitude it is not probable that there is more than one, though a partial second brood may occur."

REMEDIAL MEASURES.

"In fighting these insects we may follow two lines of operation, according as they are few in number or abundant. Where there are but few, it may be as well to watch for and kill the pupæ at the base of the trees. This is of great importance, since the larvæ from a few beetles, if allowed to lay their eggs, will do much damage. The loose bark of the trunk and larger limbs should be scraped off, that as many of the insects as possible may descend to the ground, and then once in four or five days those which have collected should be killed. This may be done by hand, where they are only scattering, or by the application of some contact insecticide, as boiling water, or kerosene emulsion diluted four times. If individual tree owners would care for their trees in the manner outlined, a great deal might be done to check the advance of this pest. Where the insects are numerous, more active measures must be adopted. If anything like thorough work is desired, it is of great importance to kill the beetles themselves when they first appear on the trees in the spring."

"Next in importance to the killing of the beetles is the killing of the larvæ, as they appear two or three weeks after the unfolding of the leaves."

Killing the beetles and larvæ is done by spraying the leaves with arsenate of lead much diluted.

If our town does what is needed in the year 1901 to best protect public shade trees, the tree warden may not be able to attend to trees on private grounds in the short time when

the elm leaf beetle can be fought to the best advantage. This pest has spread so completely through the central part of the town that to avoid great harm to the trees every individual may need to protect his own trees. The tree warden can supply arsenate of lead and kerosene emulsion to parties for their own use more conveniently and cheaply than they can be made in small quantities.

This insect pest was first known in Plymouth about four years ago, but its ravages were not much noticed until July, 1900, when the yellow grubs were found in large numbers upon the ground near the trunks of trees and in the bark; the leaves of many of the trees had been much eaten by the larvæ. A visit to Framingham and Springfield, where they had been fighting the pest a few years, gave us much valuable information as to methods of treatment. All that could be done to advantage so late in the year was to scrape the loose bark from the trees as high as could be reached from the ground, sweep together the bark, grubs, and any larvæ and beetles that were found, and burn the whole mass; then to spray the trunk and limbs with kerosene emulsion to the height of fifteen to twenty feet and the ground to some extent, to kill any insects that might be crawling or hiding within reach of the spray. To pay the probable cost of such work, the Selectmen authorized the tree warden to draw from the town treasury to the amount of \$200.

Paid for—

A force pump and fixtures,	\$28 33
200 feet of hose, nozzles, coupling, and rubber tubing,	30 40
Scraping tools, \$7.23; kerosene oil, \$21.42,	28 65
Whale oil soap and carbolic acid,	7 43
Labor, \$104.40; trip to Springfield, \$8,	112 40
	<hr/>
	\$207 21
Received from 18 parties for scraping and spraying trees on private land,	19 90
	<hr/>
Amount of appropriation used,	\$187 31

By actual count there are about 1,200 large and 600 small elm trees in the streets and other public places in the town, not including cemeteries. In the list of small trees are put all that can be sprayed to their tops without climbing into the trees and which need no scraping. The most of the large trees should be scraped to the height of twelve to twenty feet to remove the beetles now hiding under the loose bark and in cavities in the limbs and trunk; such scrapings should be burned immediately. This work should all be done before April. Much of the scraping has to be done on ladders and would cost two hundred and fifty dollars, or more.

Spraying the leaves with arsenate of lead, much diluted, should begin about the middle of May and continue about six weeks, the interval between the first and last hatchings of larvæ. A few weeks later, as the yellow grubs (pupæ) begin to form, is the time to spray the trunks and ground with kerosene emulsion and destroy what would otherwise be the seed for the next crop of beetles.

The city of Springfield, by its city forester, William F. Gale, had 15,000 trees sprayed in the spring of 1900, a larger proportion of them than of ours being small trees. To do the work sixty-five men were employed the most of the time for six weeks, making thirteen working gangs, each with a team carrying pumping machinery and materials; two of the pumps being driven by steam power. Some trees were sprayed twice. The trees had been trimmed and scraped in previous years. The total cost of labor and materials for spraying was four thousand, two hundred and twenty-six dollars, or an average cost of about thirty cents per tree, but some trees cost over five dollars to spray them. Mr. Gale believes it is economy in the end to do the work thoroughly and spray all the elms in a district so much infested with beetles as ours is. To work to advantage we would probably need as many as three gangs of men, each with team and pump worked by man power.

Estimate of appropriation needed for 1901:

For trimming trees in early spring,	\$300 00
For scraping trees in March,	250 00
For pumps, hose and other tools,	200 00
Labor and materials for spraying leaves in May and June,	500 00
Final spraying to kill the grubs,	150 00
<hr/>	
Total,	\$1,400 00
and services of tree warden,	?

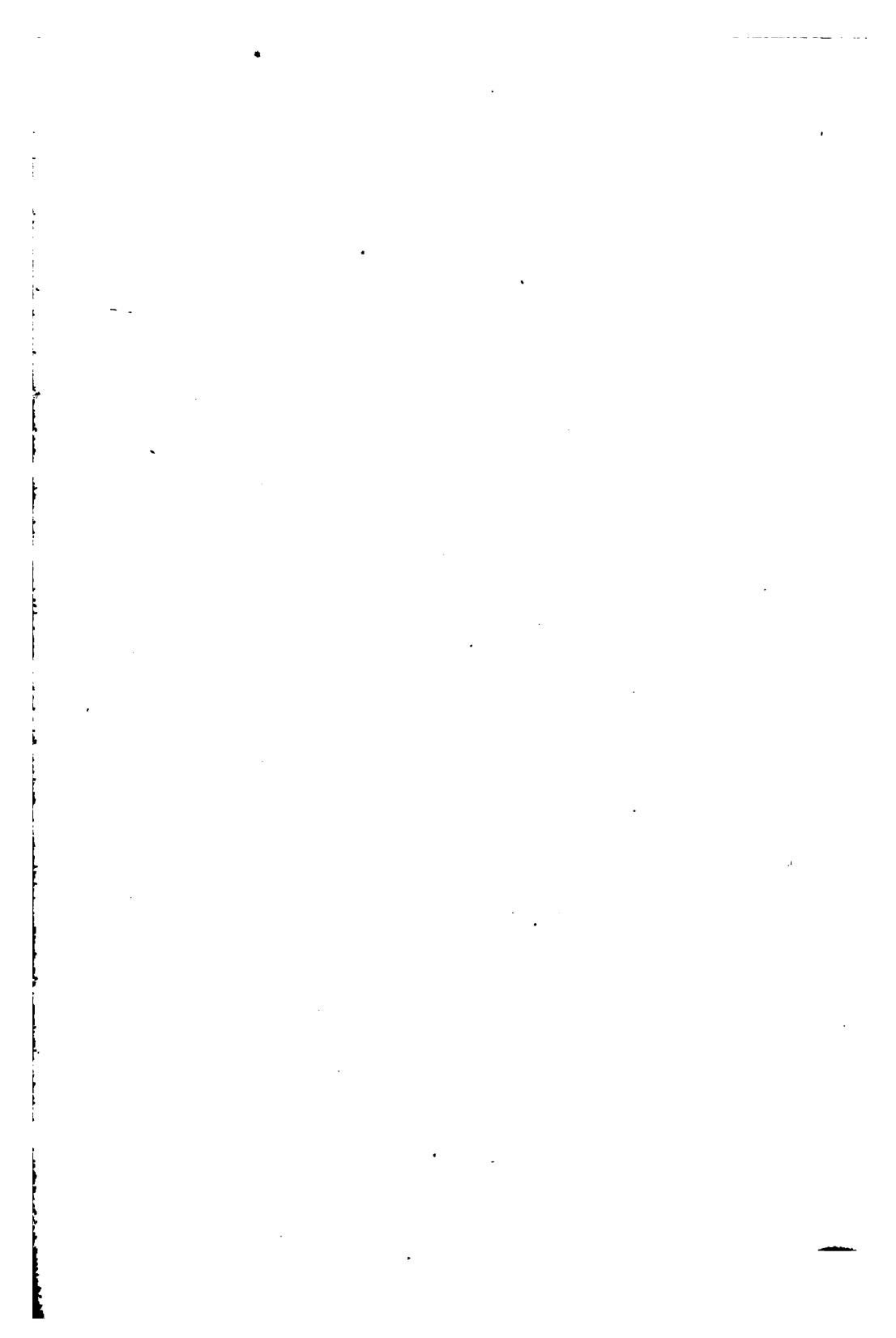
Trimming trees before spraying would reduce the amount to be sprayed and facilitate the movement of men in the trees.

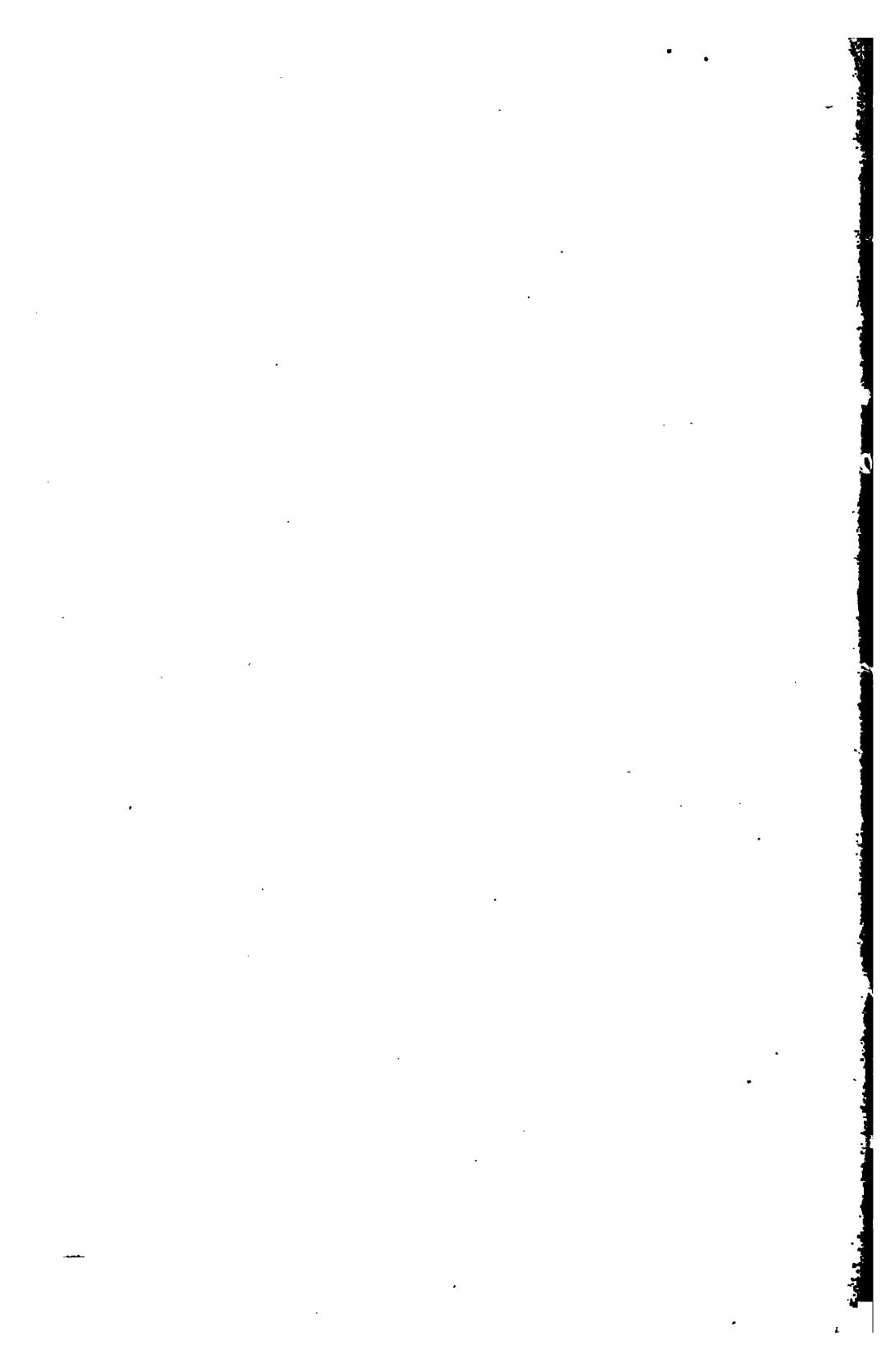
I take this opportunity to thank the Selectmen for their unwavering support of all measures which I have felt it the duty of the tree warden to try to carry out, also to thank the citizens for their general approval of the methods used in trimming trees on the line of the electric road, where the necessities of the case required what, without full investigation, might seem to be too much trimming. I must decline further service at the end of the current term.

NATHANIEL MORTON,
Tree Warden.

PLYMOUTH, MASS., December 31, 1900.







REPORT

—OF THE—

Park Commissioners,

Forester

—AND—

Tree Warden

—OF THE—

TOWN OF PLYMOUTH.

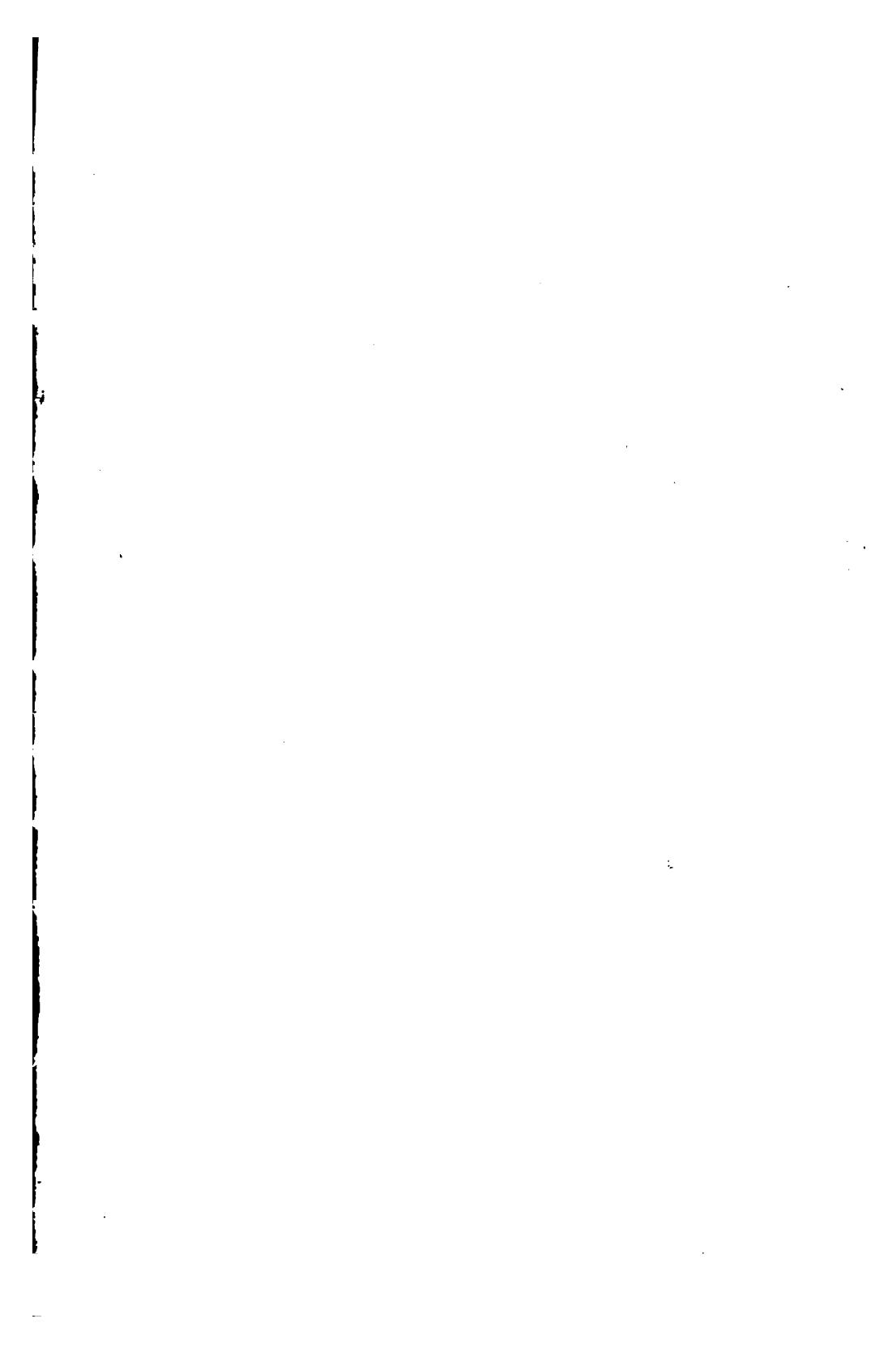
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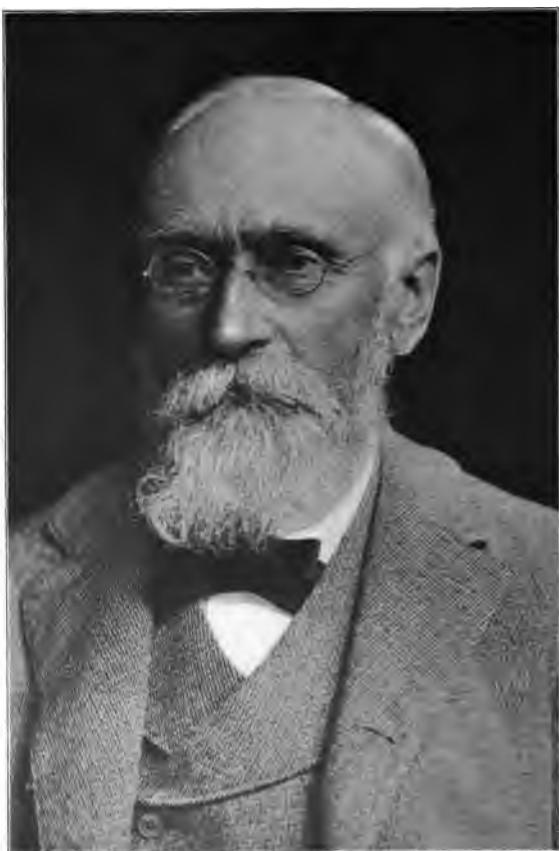
PLYMOUTH

THE MEMORIAL PRESS

1903







NATHANIEL MORTON,

REPORT

—OF THE—

Park Commissioners,

Forester

—AND—

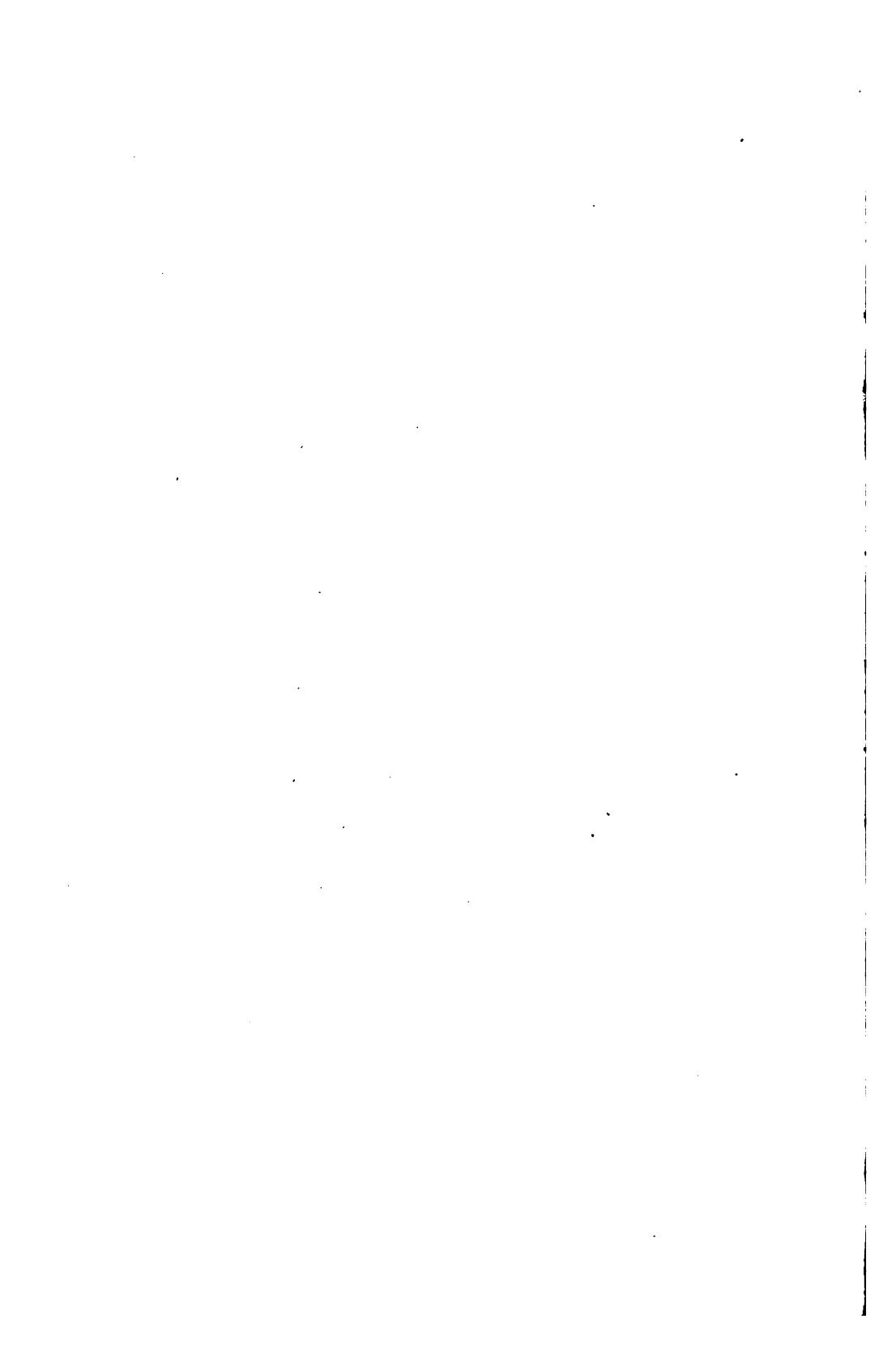
Tree Warden

—OF THE—

TOWN OF PLYMOUTH.—

1902.

PLYMOUTH
THE MEMORIAL PRESS
1903



FOURTEENTH ANNUAL
REPORT OF THE PARK COMMISSIONERS.

To the Inhabitants of the Town of Plymouth—

The Park Commissioners herewith present the fourteenth annual report of the condition of the parks and lands under their charge.

At the outset it becomes our sad duty to record the death of Nathaniel Morton, the founder and devoted friend of Plymouth Parks, which occurred on July eighteenth. At a meeting of the Park Commissioners soon, thereafter, the following was submitted and ordered to be placed on record:

"Mr. Morton's death has removed one with whom we have been associated from the beginning of Plymouth Parks. His own connection with them, and the reasons which led him to become identified with them, are perhaps best told in his own words in his "Souvenir of Plymouth Parks," published last year, and need not be further referred to here. His love for the woods and trees was perhaps inherited, for his father, the late Mr. Ichabod Morton, was instrumental in the planting of many of the shade trees now ornamenting some of our streets. It is difficult to realize, at first, to what an extent Mr. Morton cared for the woods and waters which came to be called Morton Park; but many of the trees he knew personally, and he watched and measured their growth from year to year, and cared for their development, cutting away the less desirable in order to make room for the better; planting new where he foresaw that the old would in a few years be removed or become unworthy, and again cutting extensively

in order to open up views of a beautiful hillside or hollow, a secluded cove or open expanse of Billington Sea or Little Pond.

As time went on his ideas of the proper management of the woods developed and he became impressed with the necessity of "more room" and "more light" for the "individual tree to develop to its best estate, and he did not hesitate to cut even although there were some who criticized such "wood chopping." The result after only a few years has justified his judgement, and it will be more and more approved as time goes on.

As, in the life history of the pine tree, perhaps his most favorite tree, when, in its early years the leader is broken off, time is required for the tree, at length, to recover its normal condition of growth and development, so here, the impulse has been given, the form has been determined, the broad principles have been established, and as years go on we shall appreciate, more and more, that the work which he began was carried forward so far and so well that it only remains for his successors to come into harmony with his ideas in order to maintain the success which he achieved.

Perhaps the best monument which he could have would be a simple tablet at the entrance to Morton Park with the inscription:

Si monumentum quæret, circumspice."

The following extract from Mr. Morton's will explains itself:

"To the inhabitants of the Town of Plymouth, two thousand dollars, (\$2,000.00) to be invested in real estate mortgages, or other securities that the Selectmen may consider more desirable; the income from which to be expended, annually at Morton Park by the Park Commissioners. One-half the income to be expended first, to place and keep in order signs to mark the roads, paths and prominent localities in said Park and to keep the paths and open places free from

large accumulations of leaves. Second, the balance, if any, to be expended in improving the paths and making new paths where considered desirable by the Commissioners. The other half of the income to be expended at Morton Park as the Commissioners may think best.

We are informed that this bequest has been recently paid over to the Selectmen by the Executrix.

The work of caring for the Parks was carried on personally by Mr. Morton, as chairman of the Board, until his decease.

MORTON PARK.

Considerable work was done in Morton Park in the way of clearing and trimming the forest growth, and in laying out and constructing new paths, especially a path along the westerly side of the Park on land acquired by Mr. Morton's efforts from the "Wabasso Associates." The land was formally accepted by the town, and added to the Park at the town meeting held August 12, 1902.

NEW BRIDGE AT BILL HOLMES'S DAM.

Much progress was made by Mr. Morton in the construction of the new bridge referred to in the last annual report of the Park Commissioners. This work has been carried so far forward that the foundations are in position, and the side walls brought up above the surface of high water in the brook. A considerable quantity of stone has been collected for use in the completion of the bridge. So long as Mr. Morton remained with us, the cost of all this work was paid for by him, none of it being charged to the Park appropriation. It was Mr. Morton's wish that the bridge should be completed by private subscription, and some funds have been received by the Commissioners for this purpose, viz.: Mr. Frank W. Brewer of Hingham, \$25.00; The Peirce Bros. of South Africa, one guinea.

The Commissioners have also received assurances from several other persons of a wish to assist in completing the work.

It is estimated that five hundred dollars will be required to complete the bridge. Of this amount one hundred has been subscribed, and the commissioners invite friends of the park to furnish the balance so that the bridge may be finished during the coming summer.

BEACH PARK.

A tentative protection of timbers and brush was placed upon the Beach after the "big storm" of November, 1898, to hold in place, if possible, a part of the drifting sands. This purpose was accomplished to a considerable extent thereby, and it may be desirable to continue this work in the future.

The waiting room has been cared for, and many people avail themselves of the accommodations and attractions of this, the only "shore property" of the town of Plymouth.

BURTON PARK.

The trees and shrubs and scheme of planting adopted at this formerly unsightly spot continue to show the wisdom of the attempt to make "Jumping Hill" more attractive.

BATES PARK.

This Park remains in good condition, and has been properly cared for during the year.

TRAINING GREEN.

Training Green has been a source of much pleasure during the year. The beautiful lawn effect was much enhanced during the blooming season of the white clover.

It is with regret that the Commissioners refer to certain

lawless acts which occurred during the summer. In this connection it may be stated that the Commissioners have purchased a stencil and marked the remaining settees in a conspicuous manner.

OTHER PUBLIC LANDS OF THE TOWN.

The Commissioners beg to call the attention of the inhabitants of the town to the fact that there are certain tracts of land owned by the town, such as that at "Oberry" or "Aubrey" so-called, which they believe should be placed under the supervision of such outhorities as will administer them in a manner to benefit the whole town, rather than a small portion thereof, and the future as well as the present inhabitants. They have therefore requested the Selectmen to insert an Article in the Warrant for the Town Meeting asking the Town to place such lands in charge of the Park Commissioners.

FINANCIAL STATEMENT,

For Parks.

Dr.

Expenditures for labor and tools,	\$1,135 02
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Cr.

Appropriation,	\$750 00
Appropriation for deficiency,	22 16
Received for sale of wood,	291 61
Overdrawn,	71 25
	\$1,135 02

Respectfully submitted,
WALTER H. SEARS,
THOMAS R. WATSON,
GEO. R. BRIGGS,

Park Commissioners.

REPORT OF THE FORESTER.

Balance to credit of account, January 1, 1902,	\$1,952 95
Appropriation,	1,000 00
	<hr/>
	\$2,952 95

Bills paid during 1902, for:—

Labor,	\$680 20
New wagon,	130 51
Tools and equipment,	81 50
Repairs of Equipment,	16 75
Newspaper notices and printing,	21 50
Salaries,	200 00
Due from Tree Warden Account,	12 50
Balance to credit account, January 1, 1903,	<hr/> 1,809 99
	<hr/>
	\$2,952 95

In my last report attention was called to the importance of establishing fire-belts, which can be used, often in connection with existing roads, as base lines in fighting fires.

Early in the year 1902, work was begun on such a belt, extending along "the water course," so-called, from the swamps south of Billington Sea to Little South Pond. This belt, in connection with Billington, the field and bog at "Small Gains," Little and Great South, Boot and Nigger ponds furnished, with less than a mile of trimming, a fire belt to a point five miles southwest of the town. From Nigger Pond to College Pond, about two miles, the belt follows the road, but from the west side of College Pond a short lane over the land reaches a chain of ponds which are

nearly continuous to the Carver line at the East Head Pond, whence there is a water course to Wareham.

Another belt was begun, to run from the Southwesterly cove of South Pond to Federal Pond in Carver, utilizing Widgeon, Clew and Rocky ponds as links in the chain. This belt was under construction on May 9th, when a fire started on its northerly side, in Carver, and, driven by a westerly gale, burned over the scrub oak land with great rapidity. The partially cleared belt was no impediment to such a fire,—indeed live sparks were blown across Clew Pond, a distance of several hundred yards, setting fire to the woods beyond.

The new belt south of Nigger Pond was more effective, and on this belt and the connecting ponds the fire was stopped. Hard work by Fire Ward St. George and his men saved the cottages on the west side of South Pond, a work in which the equipment of the wagon under his charge was invaluable. The following day a small force of men, in charge of Fire Wards Samuel Bradford and Stillman R. Sampson did especially good work in holding the northerly side line of the fire on a narrow road, west of Grassy Hole, among thick pines.

This fire was in many respects similar to the great fire of Sept., 1900, but the area burned was not nearly so great and a larger proportion was scrub oak land; moreover the only building burned was a small stable or shed.

During the year there were several fires along the line of the Middleboro railroad, but these were quickly extinguished by the men at Darby.

A fire in the north part of the town is mentioned, only because it was put out by Fire Ward N. L. Savery with the aid of his equipment of extinguishers. Mr. Savery could find no one to help him and he is positive that it would have been impossible for him to control the fire without the extinguishers.

On April 4th at Cedarville, at a fire along the Bourne line, Fire Ward A. M. Haskell reports his extinguishers as especially effective.

On July 18th a fire started by the side of a road not much used (undoubtedly set by the carelessness of some one of a party of fishermen who drove over this road a short time before the discovery of the fire) at a point about one-half mile south of Halfway Pond. A strong southwest wind was blowing and before the fire was discovered it was burning fiercely and had nearly reached the road at the foot of the ponds. Undoubtedly the fire would have crossed the road had not Fire Ward Edson Raymond arrived with an extinguisher in "the nick of time." Crouching in the road below the stifling smoke and under flame which scorched the oak leaves on the opposite side of the road, he used the charge of his extinguisher so effectively that the head fire was checked on the road; the subjugation of the rest was comparatively easy. The bills for this fire, starting under conditions favorable for a big fire, were only \$7.30, showing the value of quick action with the proper tools.

The great area of woodland which comprises the larger part of our big township, with its many ponds or lakes, is a great attraction to many people; nor is it difficult to find the reason. Where else within a reasonable distance of Boston can any such tract of land be found! Poor and desolate many acres may be, but even these great open stretches emphasize the feeling of remoteness from the ordinary cares of life which is so essential for rest to the busy city worker. And yet an hour by rail and an hour's drive will bring him to the heart of this great resting place. There are many beautiful spots among all this land,—now and then a bunch of pine trees which have a considerable money value—but the threat of fire hangs over them all, fire which originates mostly from gross carelessness and often finds fuel for quick development on woodlots strewn with brush which has been carelessly left by the owner.

Our first duty is to reduce the danger of fire to a minimum and it is probable that care and ingenuity, guided by experience and backed by the necessary funds, which our voters seem ready to supply, will develop a system which shall not only reduce the number of fires but succeed in checking those which may occur before they gain dangerous proportions. What has been done elsewhere may be done here if we devise methods appropriate to our surroundings. The following passage from Bruncken's North American Forests and Forestry is interesting in this connection:—

"In the cultivated forests of Europe fires are rare events and, if they do break out, cause comparatively little damage. In British India, forest fires used to be as destructive as they are in North America. But since the government has taken the work of rational forest management in hand, they have practically ceased in all districts to which the work of the forester has extended."

In "Practical Forestry" by John Gifford, recently published, the following passages occur: "Fires may be prevented by patrols during the dangerous season, by the construction of fire lanes, and by the removal of combustible materials, such as slash and litter, from the surface of the soil.

"For the prevention of fires, the punishment of fire-setters and the construction of wide fire-lanes along all public wagon roads and railroads are necessary. In this way, what are now points of danger, from which the majority of fires start, would become means for the prevention of its spread, and would serve at the same time as vantage-points in combatting it. Whenever possible these fire-lanes should be kept under cultivation, in other places the brush should be cut and all combustible materials burned at a time when there is no danger of setting fire to the adjoining woods.""It is generally recognized in Europe that the construction of suitable fire-lanes throughout the forest conduces more to the prevention of great conflagrations than any other method."

grations than any other institution. These serve as vantage-points in the fighting of fire, and often in themselves are sufficient to prevent its spread. By means of fire-lanes the country is cut into parcels, and the damage of great conflagrations very materially reduced."

On this subject Bruncken says:—

"One not familiar with the ways of forest fires is likely to be surprised at the idea that comparatively narrow roads and lanes can check conflagrations which, at other times, destroy whole forests and villages. But they must remember that by far the greatest number of forest fires are not so-called top-fires, which envelop large trees with flame and spread from crown to crown. They are generally surface fires, that merely consume the dry litter, dead branches, withered grass and such stuff on the forest floor. The moment such fires come to a bare earth road, or even to a lane covered with sparse, short and little inflammable vegetation, they stop for want of fuel. After a fire has once attained great dimensions, and especially where it has developed into a top-fire, roads and lanes are no longer of the least benefit. *

"The object of fire protection must always be to prevent the blaze, when it has once broken out, from gaining such dimensions that it becomes uncontrollable."

Reference has been made to the fact that fires are often fed by heaps of brush negligently left by wood choppers; these piles are often heaviest close to the road, where the fire-fighters may be called upon to hold a fire or may wish to start a back fire, and so greatly increase the difficulty and danger of their work. The expense of burning brush, at a safe time, is not great and no man has a moral right to endanger the property of his neighbors by keeping piles of inflammable material on his land—material which may be in-

The writer here overlooks the fact that such fire-lanes form the best base lines for back-firing,—the only way to control a great conflagration. As these big fires are accompanied by high winds, it is dangerous to back fire along an ordinary highway; the added width of the fire-lane makes the danger much less.

directly the cause of a disastrous conflagration. Let us hope that before long he will have no more legal right to do this than to endanger the lives and property of others in ways which the law now forbids!

I quote again from Gifford :—

“The greatest damage done by the lumberman is not in cutting the forest. The main purpose of the forest it to yield timber, and most of the wood cut in the past has been overripe. He has left the ground covered with slash, so that destructive fires have followed in his wake. This has prevented natural regeneration. If the destruction due to these fires could have been prevented, nature would have replenished these cut-over areas long ago. The more the lumber man cuts and the fire burns, the fewer become the seed trees, and the more difficult becomes the natural regeneration of valuable kinds.”

Are not our woodlands generally cut in the way here described?

Again, quoting from Bruncken :

“A provision which has been enacted by law in some States, and which some lumbermen follow voluntarily is to burn up, under proper precautions, the debris left on the ground after felling. It is universally admitted that these piles of tree tops and branches, lying loosely and quickly drying, are among the most dangerous places in the woods.

“Not a few destructive fires are traced to them annually. It has been demonstrated that the expense of properly burning these remnants is so low that, even where the margin of profit is very small, a lumberman can well afford to take this precaution, and any failure to do so must be ascribed to wanton disregard of the rights of others.

While our woods as a whole are of great value to the town, factors in our health, our happiness and our prosperity, through their attraction for people who come from other places to enjoy them, they do not possess one-tenth of

the pecuniary value which they might and ought to have. About the only valuable trees that we have are the occasional patches of white pines; and these are fast being cut off on account of their owners' fear of fire or because of the growing demand for logs. Some of the modern mills in neighboring towns consume from ten to twenty cords of logs a day and run nearly all the year. The time is soon coming when the mill owners will stimulate interest in growing the pine which they need and when it will pay the owners of woodland to take pains to grow valuable woods instead of oak sprouts for which, in ordinary years, there is small demand.

It is for the interest of the town to preserve as many of the valuable trees as it can; and in most cases it is better for the owner of a fine bit of forest to cut out the fully grown trees and the undesirable ones first, thereby allowing those which are growing fast to develop more rapidly and, at the same time, the seedlings to start. In this way an amount of timber, proportional to the size of the forest, can be obtained, frequently larger in total amount and still larger in value (for the quality of the lumber is better on account of its greater size) than when the whole tract is cut at once and the half grown trees felled with those that are mature. Incidentally the standing trees will reseed the bottom and sow the surrounding land and in time a fine forest will result.

The forester will do all in his power to assist anyone desiring to treat his woodland in a rational way, i. e. to get the largest return from it and at the same time to preserve its value as far as possible. Any information he has or can secure will be gladly given and if an owner of pine land wishes to market his timber the forester will endeavor to find a purchaser who will regard the interests of the owner of the land as far as possible.

It may be that purchasers can be found for such timber who would cut it little by little, taking all risk of fire them-

selves, thus preserving to the owner of the land in great measure its value for forest purposes.

To anyone familiar with the many thousand acres of land in our township which has been rendered worthless by fire no argument is needed to show the advantage that would accrue to owners, and to the town, if this land could be made to grow valuable timber. When we succeed in eliminating the danger of destructive fires there will be encouragement to work for the reforestation of much of this land.

The proved efficiency of our "fire wagons" with their equipment of chemical extinguishers and materials for recharging, etc.; the success of the fire-lane established last year, on which a small force of men stopped the fire of May 9-11, together with the fact that fire-lanes have proved most useful elsewhere, as shown by the quotations I have made from the recent works of expert foresters, indicate that we are on the right track.

Much of detail needs to be worked out in the light of experience and doubtless many improvements can be made. The new wagon which will be ready for service this year is believed to be much more serviceable and convenient than the old ones, hence it is likely to be more effective.

I can only refer briefly within the limits of this report, already too long, to the plans on which the recommendations for the coming year are based.

As soon as the private observatory referred to in my last report is built I would advise the construction of a similar observatory in the town. When this is done fires can be located quickly with considerable accuracy, and the extinguishers sent at once to the proper points.

Several more small racks, with extinguishers, should be placed in the hands of fire wards in out lying districts.

A patrol of efficient men, with extinguishers in their wagons, should be on duty on Sundays and holidays during dry weather in sections where the woods are frequented by parties. These men should be special police officers.

The main roads leading into the woods should be posted not only with signs stating the law with penalty for violations, but with others calling attention to the common forms of carelessness and the necessity for extreme caution; and in all legitimate ways it should be made impossible for any one to set a fire unless he is wantonly negligent or malicious.

The fire-lane system should be extended as fast as practicable and the established lanes kept in condition.

The item for salaries in the account at the beginning of this report covers the salary of the forester for two years 1901-2 and includes his conveyance except charges for horse hire during the fire May 9-11, incurred after his horse was used to the limit.

It must be remembered that work on fire-lanes must be done largely in the winter and early spring, before the annual town meeting. The balance to the credit of the account Jan. 1. 1903 is being drawn on for work now under way and, with the appropriation of \$500.00 asked for, must last until the March meeting 1904.

GEORGE R. BRIGGS, *Forester.*

REPORT OF TREE WARDEN.

Balance to credit of account January 1, 1902,	\$105 69
Appropriation,	1,400 00
Received for spraying, etc.,	92 78
Due Forester's account,	12 50
Overdrawn,	372 12
	<hr/>
	\$1,983 09
Expended for labor,	\$1,152 85
Materials, tools bought and hired,	213 25
Insecticide,	123 20
Trees and stakes,	52 86
Loam,	22 15
Freight and express,	7 28
Printing,	11 50
Salaries (1901 and 1902)	400 00
	<hr/>
	\$1,983 09

The campaign against the Elm leaf beetle in 1901 seemed successful enough to show that this dangerous enemy to our most beautiful shade trees can be conquered by following the same methods persistently and thoroughly. In 1901 there were a number of trees, standing on private lands, which the workmen were not allowed to spray. It was known that these trees harbored large numbers of the beetles which in all probability would spread about the town to the injury of our public trees.

Early in 1902 the Massachusetts Legislature passed a law permitting tree-wardens to enter private grounds for the purpose of destroying dangerous insects, so that it is no longer necessary to allow breeding grounds for such insects.

to exist. There is every reason, therefore, to believe that the work done in 1902 was much more effective in putting an end to the elm leaf beetle than that done in 1901, and it is probable that less spraying will be required the coming year. There is good reason to hope that by 1904 it will only be necessary to spray the trunks of the trees at the time when the larvae come down to pupate,—work that can be done from the ground rapidly and with inexpensive insecticides.

The decrease in the number of beetles last year was marked, but some appeared in midsummer in streets near the cemeteries from whence they probably came, being a second brood from trees not supposed to be infected; these trees should be sprayed this year.

It is a cause of congratulation and satisfaction that such general interest is shown in preserving our trees, and that the funds needed for the work have been so willingly appropriated by the town.

The gypsy moth and brown-tail moth, which are so troublesome in the districts north of Boston, have not yet shown themselves in Plymouth; but they may come at any time, and we should be prepared to combat them effectively on their first appearance, in view of the damage and discomfort which they cause in sections where they are numerous.

The newer streets of Plymouth, with the exception of Lincoln street, which is set with maples that are growing rapidly, were almost without trees last spring; there were also places on the older streets where trees had been removed, and some stretches which had never been planted. The warden received numerous requests to set trees in these localities, and several offers to give trees to the town, if the town would do the transplanting. Believing that trees should be planted early on new streets, not only to shade and improve these streets as quickly as possible, but in order to secure proper locations for trees before the curbings are set, and to get them well established before concrete sidewalks,

gutters and macadam are laid, the offers of trees were generally accepted by the warden,—especially as the chance to get a considerable number of desirable trees was exceptional.

Some two hundred and fifty trees were set, mostly on Standish and Warren avenues, Alden, Allerton, Court, Clyfton, Davis, Mount Pleasant, Pleasant, South, Vernon and Whiting streets. Where the soil was very poor, loam was put in the holes before planting the trees; but the warden did not feel authorized to expend much money for the purchase of soil and doubtless a good deal more might have been used to good advantage. Planting and staking the trees and the purchase and placing of suitable wire guards around them, necessarily involved an expenditure several times larger than had been planned to devote to these purposes. At the time the trees were planted it seemed probable that the lessened need for spraying would allow the planting to be done within the appropriation, but this did not prove to be the case,—several unexpected causes contributing to the overdraft.

In the opinion of the tree warden the town wants trees and cannot begin too soon to grow them, for, when large enough to give shade, they are an improvement worth many times their cost.

The trees given to the town were almost entirely elms and maples, among the latter a number of a rare variety given by T. R. Watson, Esq. To secure a somewhat greater variety some white ash, chestnut and hackberry trees were purchased. The thanks of the town are due to Messrs. Edw. L. Barnes, Chas. G. Davis, Elkanah Finney, Seth W. Paty, Wm. P. Stoddard, B. O. Strong, Frank Tripp, T. R. Watson, and to Mrs. Wm. P. Stoddard for gifts of trees; Mr. Paty also gave loam. The planting seems to be successful, though a few trees failed to live and some have been mutilated in spite of their guards.

Horses are frequently left in the streets without being

hitched, and they frequently injure trees,—especially small trees, about which it is impossible to place guards above which a horse cannot reach. The only way to prevent such injuries is to prosecute those who allow their horses to cause them. If it is generally understood that it will cost five dollars or more to allow a horse to mutilate a tree in the least degree, drivers will take proper care of them. It is impossible for the tree warden to make complaint without evidence to support the charge, and he asks the assistance of all persons interested in the matter.

Probably no trees will be found comparable to American elms for street trees. Loftly, dignified yet graceful, with a considerable variety of shape, they carry their foliage high enough and far enough from the trunks to shade our rooftops, and yet they do not shut out light and air as the denser trees do. Most of the maples do not seem to thrive in this locality, though fine specimens of the white or silver maple may be found on our streets. Whenever it seems practicable to use some of the other kinds of trees which are gaining favor as street trees, it seems advisable to set them in the future in the interest of variety, as we have a good background of elms and maples, and there are always situations that demand an elm.

A change in the sidewalk at Seaside left an elm of considerable size in the street; this had to be moved about three feet, involving considerable labor. Street improvements also made necessary the lowering and straightening of another tree on Court street, and similar work had to be done at Seaside, where a tree leaned too far into the street. Several large trees on Court street, which were probably killed by gas, had to be removed, and all these necessary jobs have been paid for from the tree warden appropriation, to the relief of the street department, on which the work would have fallen had no appropriation been made for the care of the trees.

There seems to be no way to save trees when the ground about their roots becomes poisoned with gas, and it is probable that several more fine trees will have to be removed from this cause. The loss of these great elms is irreparable. Electric wires continue to damage trees from time to time. Probably more care is used in stringing these wires than has been the case in the past and doubtless contacts with growing trees occur in unexpected places; but it is the business of the companies owning the wires to guard against such contacts, and sometimes their agents are indifferent or careless.

In order to secure more care it must be the policy of the tree warden to claim damages for injuries done to the trees by wires, and to prosecute violations of the law by the men who string them.

In 1901 the appropriation asked for, and made, was estimated outside of the salary of the tree warden; in 1902 the appropriation was expected to cover his salary for that year, but not for 1901. It was also voted by the Town in 1902 that the selectmen fix the salary of the warden. In August, 1902, the Selectmen voted to make the salary \$200, and \$400, the salary for both years, was paid and charged to the 1902 account. The warden wishes to express his thanks to the Selectmen for their generous action, which accounts in part for the overdraft for the year. No work, not absolutely necessary, was undertaken after this date. The salary of the warden included his conveyance, where necessary, and in 1902 the use of a horse and wagon in the work of the department on a number of occasions.

It is probable that there will be less work to do on the trees the coming season, and that the warden's salary can be reduced in consequence.

An appropriation of \$1,000 is recommended. Unless unforeseen emergencies arise, this will be sufficient, and it is quite possible that the elm leaf beetle has been so much

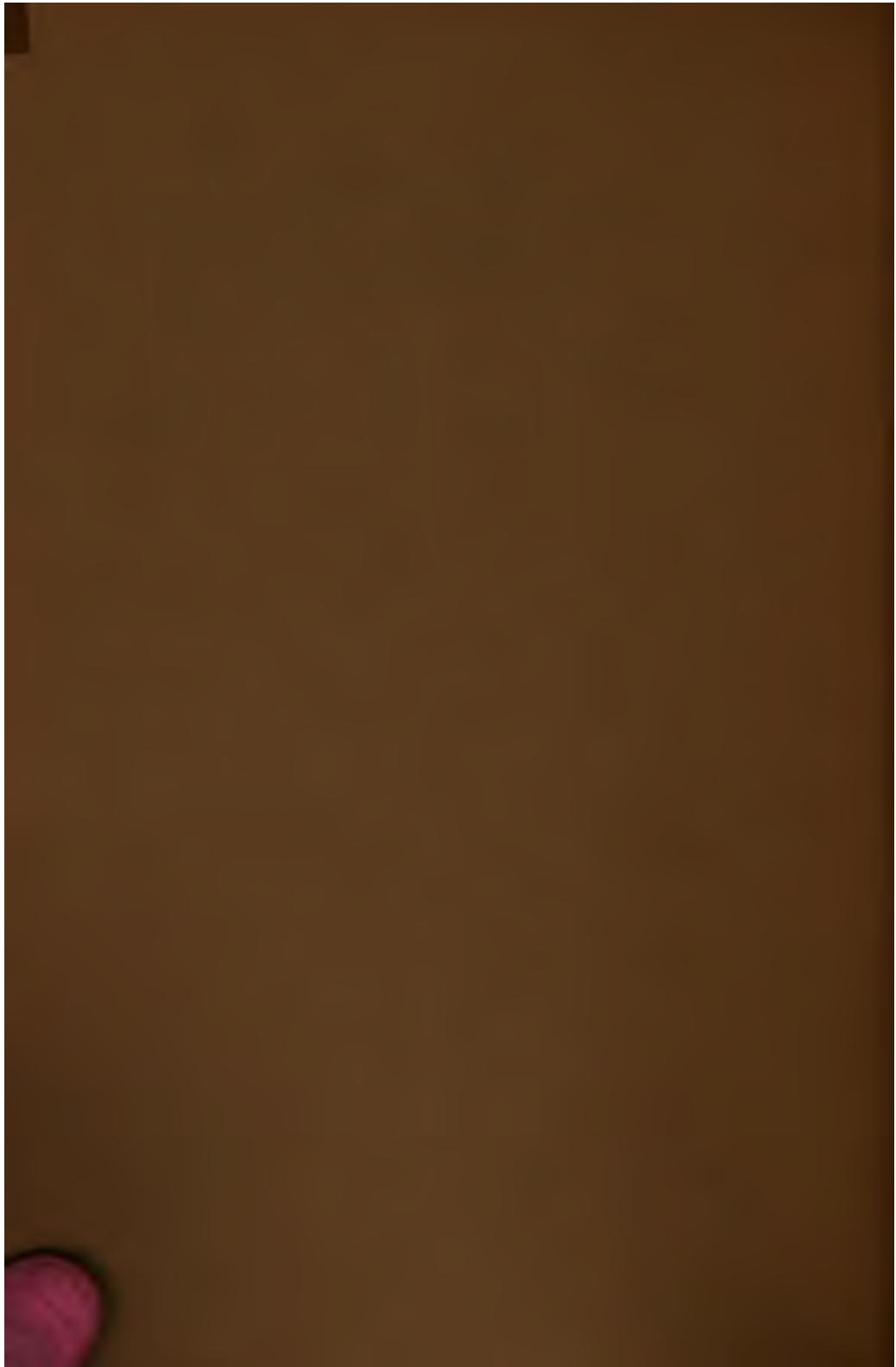
reduced in numbers that it will not be necessary to use the whole appropriation.

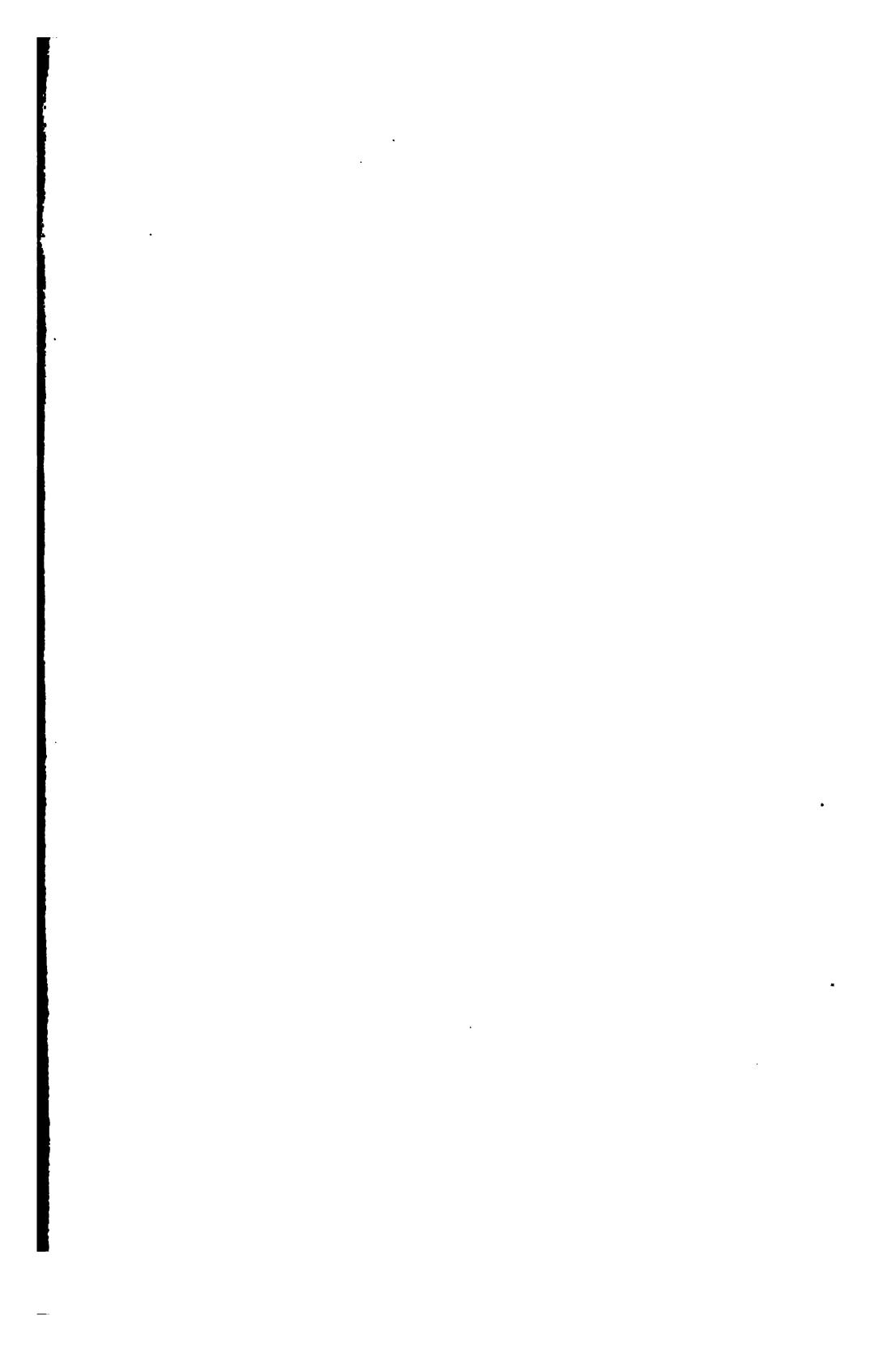
The tent caterpillar has become so common, and does such damage in orchards, that it seems to be the duty of the town to destroy the nesting places so common and so unsightly in the wild cherry trees along our roadsides. Such action should stimulate and encourage the owners of orchards to care for their own trees.

GEORGE R. BRIGGS.

Tree Warden.











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